FINAL

ENVIRONMENTAL ASSESSMENT

STAND-UP AND OPERATIONS OF THE

MARITIME SAFETY AND SECURITY TEAM

SEATTLE, WASHINGTON

COMMANDANT

UNITED STATES COAST GUARD (G-OPD)

JULY 2002

ABBREVIATIONS AND ACRONYMS

˚F	degrees Fahrenheit
%HA	Percent Highly Annoyed
AAQS	Ambient Air Quality Standards
AHPA	Archaeological and Historic Preservation Act
ANSI	American National Standards Institute
AQCR	Air Quality Control Region
ARPA	Archaeological Resources Protection Act
AUL	Authorized Use List
CAA	Clean Air Act
CARB	California Air Resources Board
CBR/HAZMAT	Chemical, biological, and radiological hazardous materials
CERCLA	Comprehensive, Environmental, Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COMDTINSTS	Coast Guard's Commandant Instructions
CO	Carbon Monoxide
CZMA	Coastal Zone Management Act
dB	decibel
DNL	Day-Night Average Sound Level
DoD	Department of Defense
DOT	Department of Transportation
DRMO	Defense Reutilization Marketing Office
EA	Environmental Assessment
EDNA	Environmental Designation for Noise Abatement
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Environmental Pollution Control and Reauthoization Act
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
HAZMIN	Hazardous Waste Minimization
HPAH	High-molecular weight Polynuclear Aromatic Hydrocarbon
H.R.	House Resolution
Hz	Hertz
ISC	Integrated Support Command
km	kilometer
LPAH	Low-molecular weight Polynuclear Aromatic Hydrocarbon
lbs	pounds
MARSEC	Maritime Security
MMPA	Marine Mammal Protection Act
MPA	Marine Protected Area
MSST	Marine Safety and Security Team
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
mg/m^3	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NAHB	National Association of Homebuilders
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ozone
Pb	Lead
PCBs	Polychlorinated biphenyls
P.L.	Public Law
PM_{10}	particulate Matter ≤ 10 microns in diameter
PSCAA	Puget Sound Clean Air Agency
PSU	Port Security Unit
RBS	Response Boat-Small
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SAR	Search and Rescue
SARA	Superfund Amendments and Reauthorization Act
SIP	State Implementation Plan
SHPO	State Historic Preservation Office
SO_2	Sulfur Dioxide
SO_X	Sulfur Oxide
tpy	tons per year
U.S.	United States
USS	United States Ship
USC	United States Code
USCG	United States Coast Guard
USFWS	United States Fish Wildlife Service
U&A	Usual and Accustomed
VOC	Volatile Organic Compound
VTS	Vessel Traffic System
WAC	Washington Administrative Code
$\mu g/m^3$	Micrograms per cubic meter
µPa	microPascal

USCG
FINDING OF NO SIGNIFICANT IMPACT
FOR THE STAND-UP AND OPERATIONS OF THE MARITIME SAFETY AND SECURITY TEAM SEATTLE, WASHINGTON

The Proposed Action includes the standing up and operations of one Maritime Safety and Security Team (MSST) co-located with the ISC Seattle, Washington. The MSST will consist of 73 active duty personnel and 33 reserve personnel, the conversion of a warehouse to office/storage space, and six Response Boats-Small (RBS). All six RBSs can, but will not necessarily, be operating at once. The RBSs will have outboard motors, will be no larger than 25 feet, will be highly maneuverable, will be capable of quickly reaching and sustaining high speeds (in excess of 40 knots), and will carry between three and six crewmembers. Other requirements will include, but not be limited to, communication equipment, protection for the crew, and defensive weaponry. When not in use, RBSs may be placed on trailers.

The MSST will normally conduct operations in the Port of Seattle and Puget Sound. The MSST is primarily intended for domestic operations, in support of the Group or Captain of the Port. Operations will closely parallel existing USCG traditional port security operations, but will provide complementary, non-redundant capabilities that will be able to close significant readiness gaps in our nation's strategic ports. The MSST will escort a variety of vessels and maintain specific security zones in the Port of Seattle. They will be capable of operating seven days a week, 24 hours a day, in all weather conditions. They will also operate with, and be supported by, both military and civilian government organizations, commercial and non-government entities. The MSST will be transportable via land transportation, USCG cutter, and USCG or other military aircraft worldwide.

This project has been thoroughly reviewed by the U.S. Coast Guard (USCG) and it has been determined, by the undersigned, that this project will have no significant effect on the human environment.

This Finding of No Significant Impact (FONSI) is based on the attached contractor-prepared Environmental Assessment (EA), which has been independently evaluated by the USCG and determined to adequately and accurately discuss the environmental issues and impacts of the Proposed Action and provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The USCG takes full responsibility for the accuracy, scope, and content of the attached EA.

July 3, 2002 — Date
Environmental Reviewer
CHIEF, G-SEC-3 — Title/Position

I have considered the information contained in the EA, which is the basis for this FONSI. Based on the information in the EA and this FONSI document, I agree that the Proposed Action as described above, and in the EA, will have no significant impact on the environment.

3 July 02 — Date
Responsible Official
Chief, G-OPD — Title/Position

USCG

ENVIRONMENTAL ASSESSMENT

FOR THE STAND-UP AND OPERATION OF THE MARITIME SAFETY AND SECURITY TEAM SEATTLE, WA

This USCG environmental assessment was prepared in accordance with Commandant's Manual Instruction M16475.1D and is in compliance with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Council of Environmental Quality Regulations dated 28 November 1978 (40 CFR Parts 1500-1508).

This environmental assessment serves as a concise public document to briefly provide sufficient evidence and analysis for determining the need to prepare an environmental impact statement or a finding of no significant impact.

This environmental assessment concisely describes the proposed action, the need for the proposal, the alternatives, and the environmental impacts of the proposal and alternatives. This environmental assessment also contains a comparative analysis of the action and alternatives, a statement of the environmental significance of the preferred alternative, and a list of the agencies and persons consulted during EA preparation.

7/3/02 — Ms. Kelly Kelley — Environmental Protection Specialist
Date — *Preparer/Environmental Project Manager (as applicable) — Title/Position

July 3, 2002 — Edward L. Woodall — CHIEF, G-SEC-3
Date — **Environmental Reviewer — Title/Position

In reaching my decision/recommendation on the USCG's proposed action, I have considered the information contained in this EA on the potential for environmental impacts.

3 July 02 — W.B. Buchanan — Chief G-OPD
Date — Responsible Official — Title/Position

*The USCG preparer signs for NEPA documents prepared in-house. The USCG environmental project manager signs for NEPA documents prepared by an applicant, a contractor, or another outside party. **Signature of the Environmental Reviewer for the Bridge Administration Program may be that of the preparer's.

FINAL

ENVIRONMENTAL ASSESSMENT

STAND-UP AND OPERATIONS

OF THE

MARITIME SAFETY AND SECURITY TEAM

SEATTLE WASHINGTON

Contract No.: DTUSCG23-00-D-ADW141
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Prepared for:

Commandant
United States Coast Guard (G-OPD)
2100 Second Street, SW
Washington, DC 20593-0001

Prepared by:

e²M, Inc.
10331 Democracy Lane
Fairfax, Virginia 22030

July 2002

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1. Purpose of and Need for the Action

1.1 Introduction

The United States Coast Guard (USCG) is this nation's oldest maritime agency. Throughout its long history, the USCG (and its predecessors) has responded when called upon to perform its many and varied missions: from its earliest days as a "tax-collector" for the newly formed United States (U.S.), through its role in every major military conflict, to its activities to stop illegal aliens and narcotics, and its long-history of search and rescue of people from the sea. The USCG's multi-mission responsibilities stem from the combined goals of its five core-founding agencies now joined under one agency. The former agencies include the Revenue Cutter Service, the Lighthouse Service, the Steamboat Inspection Service, the Bureau of Navigation, and the Life-saving Service. Prompted by economics, maritime disasters, and war, a series of laws were passed defining each agency's missions and authority.

Today, the USCG operates in all maritime regions:

- Approximately 95,000 miles of U.S. coastlines, including inland waterways and harbors
- More than 3.36 million square miles of Exclusive Economic Zone (EEZ) and U.S. territorial seas
- International waters and other maritime regions of importance to the U.S. for missions such as search and rescue, law enforcement, alien migrant interdiction, and national defense

In October 1995, the Secretaries of Transportation and the Department of Defense, the Chief of Naval Operations, and the Commandant of the USCG signed a Memorandum of Agreement (MOA) identifying the unique national defense capabilities of the USCG:

- Military Environmental Response Operations
- Peacetime Military Engagement
- Maritime Interception Operations
- Coastal Sea Control Operations
- Port Operations, Security and Defense

Domestic port security and protection has long been a core USCG mission. After the end of the Cold War, and in the wake of Desert Shield/Desert Storm, Combatant Commanders recognized a need for deployable Port Security and Harbor Defense units. The USCG's Maritime Defense Zone mission was expanded to include overseas ports and Port Security Units (PSUs) were formed to meet that need. The PSUs missions can be divided into three broad categories:

- Sea Control and Harbor Approach

- Harbor Approach Defense
- Harbor Defense/Port Security

In the past several years the PSUs have been deployed multiple times. Last year, PSUs were deployed to the Arabian Gulf in the wake of the United States Ship (USS) Cole incident.

The events of September 11, 2001 significantly changed the nation's homeland security posture. Terrorism is a clear and present danger to the U.S. The USCG and Department of Defense (DoD) are currently partners in two major actions: Operation Enduring Freedom and Operation Noble Eagle.

Operation Enduring Freedom generally refers to U.S. military operations associated with the war on terrorism outside the U.S. USCG PSUs have deployed in support of this operation.

Operation Noble Eagle generally refers to U.S. military operation associated with homeland defense and civil support to federal, state, and local agencies in the U.S., and includes the increased security measures taken after the September 11, 2001 terrorist attacks. The operation involves joint agency coordination and cooperation to ensure our nation and borders are protected from future attacks. An increased USCG maritime security presence will prevent and deter those who would cause harm to innocent Americans.

The USCG has dramatically shifted its mission activity to reflect its role as a leader in Maritime Homeland Security. The USCG's heightened maritime security posture will remain in place indefinitely.

1.2 Coast Guard Missions

The USCG is unique in that it is the only maritime service with regulatory and law enforcement authority, military capabilities, and humanitarian operations. These missions may occur 24-hours a day in severe environments, from arctic to tropical, whenever and wherever the USCG's presence is required. USCG tasks in the maritime aspects of major theater warfare encompass critical elements of naval operations in littoral regions, including port security and safety, military environmental response, maritime interception, coastal control, and force protection. More than two centuries of littoral warfare operations at home and overseas have honed the USCG's skills most needed in support of the nation's military and naval strategies for the 21st century. The USCG's missions can be described in four general categories:

1.2.1 Maritime Law Enforcement

Since its creation in 1790 to enforce tariff laws, law enforcement has been a primary responsibility of the USCG. Section 14 United States Code (U.S.C.) 89(a) specifically gives USCG officers and petty officers the unique authority to make inspections, searches, seizures, and arrests for violations of laws of the U.S. The USCG engages in several areas of law enforcement:

- Living Marine Resources Law Enforcement
- Drug Interdiction
- Alien Migrant Interdiction Operations
- General Law Enforcement

As a lead federal agency for at-sea enforcement of national fisheries and marine resource laws and international treaties, the USCG conducts a number of at-sea enforcement activities. Enforcement is carried out to benefit fisheries, to protect important marine habitat, and to protect threatened and endangered species, including: the northern right whale, Kemp's Ridley sea turtle, Hawaiian monk seal, Steller sea lion, and harbor porpoise. Between September 11, 2001 and March 8, 2002, the USCG responded to 115 pollution cases, interdicted 1,529 illegal immigrants, seized 70,560 pounds (lbs) of cocaine, and seized 19,534 lbs of marijuana.

1.2.2 Maritime Safety

The USCG's Search and Rescue (SAR) and International Ice Patrol services are essential to protecting lives and property. The USCG averages 50,000 calls for assistance each year and saved approximately 3,800 lives in 1999. Between September 11, 2001 and March 8, 2002, the USCG conducted over 7,000 SAR cases, assisted over 10,000 mariners and saved 731 lives. The USCG responds to all calls of distress, whether from fishing and recreational boats, downed aircraft, or freighters and tankers. Additionally, the USCG continues to support programs to ensure that boats are safe for public use and that they contain appropriate safety equipment.

1.2.3 National Defense

Today, although included within the Department of Transportation (DOT), the USCG remains an armed force with a national defense mission. Examples of this national defense mission include providing peacetime presence, crisis-response, and combat operations across the spectrum of military engagement scenarios, from small-scale contingencies to major theater wars. These missions are essential military components to support joint and combined forces in peacetime, crisis, and war:

- Military Environmental Response Operations
- Peacetime Military Engagement
- Maritime Interception Operations
- Coastal Sea Control Operations
- Port Operations, Security and Defense

Between September 11, 2001 and March 8, 2002, the USCG conducted over 35,000 port security patrols, conducted over 3,500 air patrols, boarded over 2,000 "high interest" vessels, and escorted 6,000 vessels

into and out of port. In addition, they established and maintained 124 Security Zones in our nation's ports (USCG 2002a).

1.2.4 Marine Environmental Protection

The USCG protects critical natural resources in the 2.25 million square mile U.S. EEZ and provides a wide range of prevention, protection, containment, and recovery activities and operations. The USCG also responds to oil spills of all sizes, funds and often directs their cleanup, and assists in identifying the responsible parties. In the post September 11th era, pollution response activities may be needed even more as suspected terrorist targets and tactics focus on water supply and infrastructure. Between September 11, 2001 and March 8, 2002, the USCG responded to 115 pollution cases.

1.3 Purpose and Need for the Action

In addition to meeting its other mandated missions, the USCG's role in homeland security has recently received extra emphasis. As noted, this mission is not new for the USCG. While it is more visible today than it was prior to the tragic events of September 11, 2001, it remains just as important as when the USCG first began protecting our national sovereignty 211 years ago (USCG 2002b).

As part of Operation Noble Eagle, the USCG is at a heightened state of alert protecting more than 361 ports and 95,000 miles of coastline, America's longest border. The USCG continues to play an integral role in maintaining the operations of our ports and waterways by providing a secure environment in which mariners and the American people can safely go about the business of living and working (USCG 2002b).

In the wake of the September 11, 2001 terrorist attacks, the USCG immediately mobilized more than 2,000 reservists in the largest homeland defense and port security operation since World War II. The USCG has increased its vigilance, readiness, and patrols to protect the country's 95,000 miles of coastline, including the Great Lakes and inland waterways.

The USCG has several roles in defense of homeland security:

- Protect ports, the flow of commerce, and the marine transportation system from terrorism.
- Maintain maritime border security against illegal drugs, illegal aliens, firearms, and weapons of mass destruction.
- Ensure that U.S. military assets can be rapidly deployed and re-supplied, both by keeping USCG units at a high state of readiness, and by keeping marine transportation open for the transit assets and personnel from other branches of the armed forces.

- Protect against illegal fishing and indiscriminate destruction of living marine resources, prevention and response to oil and hazardous material spills—both accidental and intentional.
- Coordinate efforts and intelligence with federal, state, and local agencies.

The Maritime Safety and Security Team (MSST) proposal is a direct response to September 11, 2001. The MSSTs are urgently needed to improve existing domestic port security capabilities. While the MSSTs will be used similarly to the PSUs to augment existing USCG forces in the U.S., the MSSTs will not duplicate existing protective measures. They will provide complimentary, non-redundant capabilities that will be able to close significant readiness gaps in our nation's strategic ports (USCG 2002c; USCG 2002d).

Under Public Law (P.L.) 107-87, an emergency response supplemental enacted by Congress, monies were appropriated to fund USCG anti-terrorist activities, including the mandated establishment and operation of four Mobile MSSTs. These funds are available until September 30, 2003. Congress had considered this issue carefully. Initially, the Senate suggested six MSSTs:

> "While the President's request includes $9,690,000 for the establishment of two active duty Maritime Safety and Security Teams, the Committee finds this request to be insufficient. The request would provide for only one team for both the Atlantic and Pacific operating areas, providing little permanent relief to regular operating units so that they can, once again, pursue all of their multi-mission responsibilities. As such, the Committee has provided a total of $29,070,000 and 522 full-time permanent staff years for the establishment of six such teams. This appropriation will allow for one team with area-wide responsibilities on both the East and West coast. In addition, the Committee directs that the four remaining teams be located in those Port areas that present the greatest Port Security challenges, especially those ports with a substantial concentration of critical Department of Defense facilities and a shortage of alternative floating assets. Those units will be responsible solely to the Port Security needs in those ports and should allow the other operating units in those regions to return to their other critical responsibilities" (Congress 2001a).

The final version of the law (P.L. 107-117 [House Resolution (H.R.) 3338]) contained a compromise reached in the conference committee. The report states:

> "Maritime safety and security teams. The conferees agree that funding for maritime safety and security teams is for establishment of 348 full-time permanent positions for four new teams, including two teams with area-wide operating responsibility (one each for the Atlantic and Pacific operating areas) and two teams to exclusively serve those port areas presenting the greatest port

> security challenges, especially those ports with a substantial concentration of critical Department of Defense facilities and a shortage of alternative floating assets. The Senate bill included funds for two area-wide teams and four teams for specific ports. The conferees have no objection to the Commandant co-locating the area-wide teams with the port specific teams if he believes that economies of scale and programmatic benefits will result" (Congress 2001b).

In order to determine which ports required additional protection, the USCG, working with other agencies, developed a matrix to assess and 'grade' each U.S. port to aid in the selection of the four top most critical ports to stand up. The elements (presented in alphabetical order) that were assessed included (but were not limited to) (USCG 2002c):

- Cargo value
- Cargo volume
- Domestic cargo
- Hazardous cargo
- Military presence
- Population

As a result, the first four ports to be assigned MSSTs are Seattle, Washington; Chesapeake, Virginia; San Pedro, California; and Galveston, Texas. In addition to these four ports, the USCG is planning to stand up MSSTs in other critical ports around the country. Additional National Environmental Policy Act (NEPA) analysis would be prepared for future stand-ups, as necessary.

1.4 Project Scope and Area

The MSST will be homeported at the Integrated Support Command (ISC) facility in Seattle. The MSST is expected to operate within the Port of Seattle and in Puget Sound to the first sea buoy. It is anticipated that most of its activities will occur within the Port itself. Accordingly, the scope of this Environmental Assessment (EA) includes the Port, Puget Sound, and the adjacent areas.

1.5 Public Involvement Process

MSSTs will normally conduct operations in the harbor or port to which they are assigned, however, MSSTs will also be transportable via land transportation, USCG Cutter, and USCG or other military aircraft. In an emergency, an MSST could be re-located to another port. The location and duration of this relocation is impossible to predict and would depend on a number of currently unknown circumstances. Therefore, potential impacts from these types of operations will also be speculative in nature. There are too many variables to adequately assess impacts at all potential ports. However, it is

expected the MSST would operate a majority of the time in its home port. Therefore, this EA focuses on the potential impacts at the home port of Seattle.

An advertisement in the Seattle Times and Seattle Post on May 9, 2002 announced the USCG's intent to prepare an EA, giving information on the proposal and seeking comments. Letters to interested parties also were mailed to appropriate federal, state, and local agencies (See Appendix A [Letter]; Appendix B [Mailing List]; Appendix C [Newspaper Announcement]; and Appendix D [Responses]). However, the USCG will accept comments on this proposed action throughout the environmental process. An announcement on the availability of the Final EA will also be placed in a local paper.

1.6 Organization of the EA

Acronyms and abbreviations are used throughout the document to avoid unnecessary length. A list of acronyms and abbreviations used throughout this document can be found on the inside cover of this EA.

Chapter 1: Purpose and Need for the Action: As a NEPA-required discussion, this chapter provides an overview of the action, describes the area in which the Proposed Action would occur, and explains the public involvement process.

Chapter 2: Proposed Action and Alternatives: This chapter describes the Proposed Action, alternatives considered, and the No Action Alternative.

Chapter 3: Affected Environment: This chapter describes the existing environmental conditions in the area in which the Proposed Action would occur.

Chapter 4: Environmental Consequences: Using the information in Chapter 3, this chapter identifies the potential for significant environmental impacts on each resource area under both the Proposed Action and No Action Alternative. Direct and indirect impacts are identified on a broad scale as appropriate in an EA.

Chapter 5: Cumulative Impacts: This chapter discusses the potential cumulative impacts that may result from the impacts of the Proposed Action, combined with foreseeable future actions.

Chapters 6 and 7: These chapters provide references, a list of this document's preparers, and a distribution list.

Appendices: This EA includes five appendices that provide additional information. Appendix A includes a copy of the Interested Party letter and its attachment. Appendix B is a copy of the mailing list that provides the names of those whom the Interested Party letter was sent. Appendix C is a copy of the

language used in the newspaper announcement. Appendix D includes the written responses to the Interested Party letter. Appendix E provides further explanation of the terminology and methodology used in the noise resource section. Finally, Appendix F is a copy of the USCG's Ocean Steward program.

2. Proposed Action and Alternatives

2.1 Proposed Action

Initially, the USCG proposes to stand-up and operate four Maritime Safety and Security Teams (MSSTs), one of which will be located at the Port of Seattle, Washington. The term 'stand-up' means establishing a new activity. The MSST will improve existing Port of Seattle security capabilities on an on-going basis. The MSSTs will not duplicate existing protective measures, but will provide complimentary, non-redundant capabilities that will be able to close significant readiness gaps in our nation's strategic ports.

The MSSTs will include 73 active duty personnel augmented by 33 reservists, support buildings for personnel, and six response boats. Personnel will consist of mostly reassigned personnel, although there may be some newly recruited personnel as well. It is anticipated that they will reside in the greater Seattle area and in the towns of Bremerton and Silverton. They will possess the specialized skills, capabilities and expertise to perform a broad range of port security and harbor defense missions that may be required. Each team will be equipped with six armed Response Boats-Small (RBSs) powered by outboard motors that can reach speeds of 40 knots in a short period of time. Depending on operational requirements, there may be two to six boats operating at any one time. The MSSTs will be capable of operating on a continuous basis, 24 hours per day, seven days per week. The RBSs and their personnel can be moved by aircraft or other means in order to respond to events in ports other than Seattle, should an increased presence be required at another port. The MSSTs will be interoperable with, and supported by, military and civilian government organizations, commercial and non-government entities.

U.S. Coast Guard (USCG) personnel will follow procedures already familiar to them: establishing port security/port safety zones, moving security zones, and escorting vessels. These are traditional port security operations that the USCG does on a daily basis. The MSSTs will have additional responsibilities:

- Enhance port security and security law enforcement capabilities at economic or military significant ports where they are based.
- Deploy for specific episodic events that require an increased security posture of a limited duration.
- Exercise security contingency plans in major ports.
- Augment the Captain of the Port capabilities.

The MSSTs will be prepared to conduct operations without the need for supplemental training or additional outfitting through all maritime security (MARSEC) levels, and will be capable of operating under the threat of chemical, biological, or radiological attack. The MSSTs will have limited ability to detect chemical, biological, or radiological attack, and must be able to evacuate a contaminated environment. They will have the ability to conduct emergency gross decontamination of personnel and

equipment. In the U.S., the local emergency response agency is responsible for mitigating incidents involving chemical, biological, and radiological hazardous materials (CBR/HAZMAT). Overseas support is provided through a Memorandum of Understanding (MOU) with other service branches.

2.2 No Action Alternative

NEPA implementing regulations require that a No Action Alternative be analyzed to provide a baseline for comparison with the action alternatives. The No Action Alternative identifies and describes the potential environmental impacts if the proponent agency does not take the Proposed Action or one of the other action alternatives, if applicable. Congress and the Executive Branch must respond to the recent and critical demand for homeland defense. Port security measures, such as MSSTs, must be created immediately. In the case of the stand-up and operations of the MSSTs, Congress strongly indicated its desire that the USCG establish MSSTs on a priority basis. P.L. 107-117 provided money for the express purpose of having the USCG (in consultation with other agencies) establish four MSSTs. In yet another indication of the urgency Congress assumed to be the situation, funds for the first four MSSTs expire at the end of the fiscal year.

This law mandates that the Commandant of the USCG establish four MSSTs to be "located in those Port areas that present the greatest Port Security challenges, especially those ports with a substantial concentration of critical Department of Defense (DoD) facilities and a shortage of alternative floating assets these units will be responsible solely to the Port Security needs and provide permanent relief to regular operating units so that they can, once again, pursue all of their multi-mission responsibilities" (Congress 2001b). Funding for personnel and equipment was appropriated, but funds for the first four MSSTs expire at the end of the fiscal year. The Commandant of the USCG clearly has no choice, except to stand up the MSSTs as directed by Congress.

The No Action Alternative, as used in this Environmental Assessment (EA), will not fulfill the USCG's purpose and need and will only be analyzed in this EA to provide a baseline with which to compare environmental impacts of the action alternative. For the purposes of providing an environmental baseline, the No Action Alternative will be analyzed as if current assets were to continue with their Port Security protocols, without additional manpower or appropriate assets. The result would be further strain on manpower and current assets and a decline in the capability of the USCG to perform their other mission responsibilities. This scenario would possibly make it easier for an attack to occur in one of the "critical" ports.

2.3 Comparison of Alternatives

The Proposed Action to stand-up and operate a MSST in Seattle has the potential for significant positive impacts from both a security and safety viewpoint, as well as easing environmental concerns. First, the additional response boats will provide added security from terrorist attack for the safety of ships entering/leaving the Port, for the numerous commercial interests and for the general population who work and live in and near the Port. Second, the Proposed Action will add additional protection from potentially significant environmental damage. While the possibility of standing up six boats may appear to be a large increase, when compared to the number and size of vessels that ply Puget Sound and the Port everyday, this is actually a small number. Also, all six boats will probably not be in use at any one time. In addition, the boats will usually cruise at 10 to 12 knots. This will result in a small wake and should not negatively impact the surrounding shores. Therefore, no mitigation activities should be necessary for the stand-up and operation of the MSST at Seattle.

Under the No Action Alternative, the added safety and security provided by the MSST would not be available. While the USCG will continue with their current level of protection, this level has already been determined to be less than is required for the Port of Seattle. The potential environmental damage from a terrorist attack may be significantly adverse. The No Action Alternative will neither meet Congress's directive nor the USCG's homeland security mission requirements.

2.4 Alternatives Considered but Eliminated

The emergency response supplemental enacted by Congress to address the emergency situation of a very plausible threat of terrorist attack on our country's ports, effectively directs the USCG to establish and operate four Mobile MSSTs in four of our "most critical ports." Congress recognized, as did the USCG, that these teams are critical to this country's homeland security and defense, and it is urgent that they be stood-up quickly. The direction and intent of this legislation and Congressional conference language allows for little in the way of viable alternatives that would meet the purpose and need. Different ports were examined as alternative choices for the stand-up of the first four MSSTs as discussed in Section 1.3 of this EA. However, other locations failed to meet the criteria of "most critical ports" to be chosen as one of the first four most critical locations.

Other agencies besides the USCG could have been considered for the Proposed Action. However, domestic port security has been a core mission of the USCG for over 200 years. The MOA, signed in October 1995 by the Secretaries of Transportation and Defense, the Chief of Naval Operations, and the Commandant of the USCG, identified those unique national defense capabilities of the USCG as a force provider. In addition, the USCG is the only U.S. maritime agency with regulatory and law enforcement authority, also having U.S. military capabilities. The USCG has been using the same tactics for harbor

defense and port security procedures as the MSSTs will be using in the Port of Seattle and other U.S. ports. This recognition of the USCG's unique capabilities coupled with the long-time advantage of providing security for U.S. ports makes the USCG the natural choice to fulfill this mission.

3. Affected Environment

3.1 Introduction

3.1.1 Resources for Analysis

The potential resources that may be impacted by the Proposed Action are identified in this section. It briefly describes, in general terms, the existing environmental conditions in the region that may reasonably be expected to be impacted by the Proposed Action.

This chapter describes the environmental and socioeconomic conditions most likely to be affected by the Proposed Action and serves as a baseline from which to identify and evaluate potential impacts from implementation of the Proposed Action. This Environmental Assessment (EA) analyzed the potential impacts on nine resource areas: biological resources, water resources, cultural and historical resources, air quality and climate, noise, hazardous materials and waste management, socioeconomics, soils and land use, safety, and infrastructure. For each resource area, the scope is limited to its relationship to existing operations. This chapter is organized by resource area.

3.1.2 Region of Influence

The MSST will be homeported at the Integrated Support Command (ISC) facilities in the Port of Seattle, Washington (see Figures 3-1 and 3-2). The Region of Influence (ROI) for the Proposed Action and the No Action Alternative is geographically defined as that area of Puget Sound from the sea buoy (located approximately at the point where the Pacific Ocean meets Puget Sound) to the southern most portion of the Port of Seattle (see Figure 3-3). The ROI includes the Duwamish Waterway and Elliot Bay (Port of Seattle). This region encompasses the area where the MSST will spend the majority of its operating time. The MSST can be deployed temporarily in certain instances to other ports or overseas as needed.

The ISC Seattle includes five large U.S. Coast Guard (USCG) cutters, three icebreakers, and two high endurance cutters. There are two vessel slips that provide four major berths: two at Pier 36 and two at Pier 37, plus a floating dock (see Figure 3-3). The MSST boats will be tied to the floating dock. Part of Building 7 (currently a warehouse) will be converted to office and storage space to support the MSST. Boats that are not underway will be stored on their trailers within Building 7.

3.1.3 Environmental Regulations, Laws, and Executive Orders

Table 3-1 is limited to those regulations, laws, and executive orders that may reasonably be expect to apply to the Proposed Action. It is not intended to be a complete description of the entire legal framework under which the USCG conducts its missions.

Figure 3-1. Large Washington Map

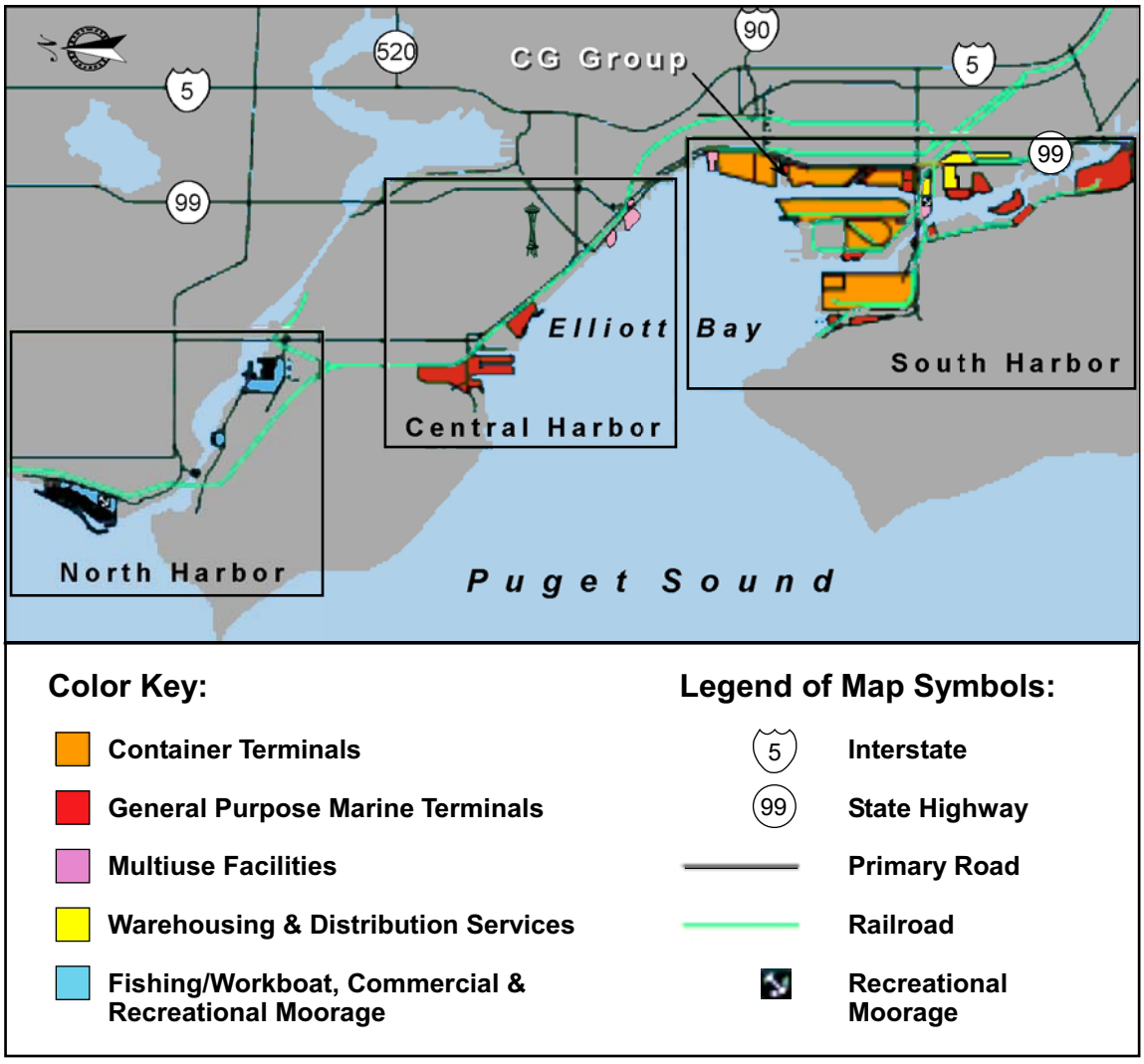


Figure 3-2. Harbor Map

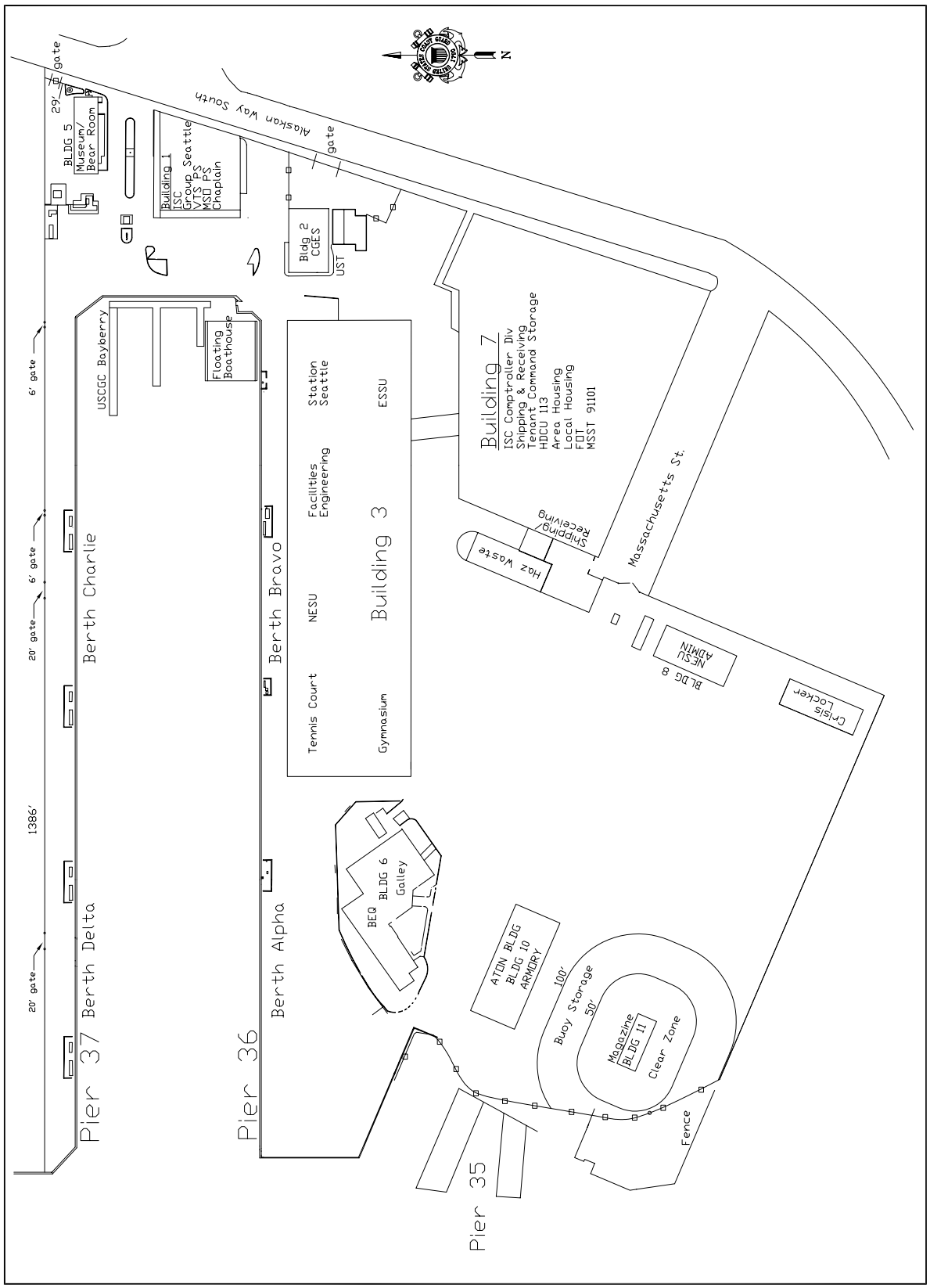


Figure 3-3. Base Map

Table 3-1. Applicable Regulations, Laws, and Executive Orders

Executive Orders		Impact on the Proposed Action
Executive Order (EO) 11593, Protection and Enhancement of the Cultural Environment	All federal agencies are required to locate, identify, and record all cultural and natural resources. Cultural resources include sites of archaeological, historical, or architectural significance. Natural resources include the presence of endangered species, critical habitat, and areas of special biological significance.	Building 7 (the only building to be effected by the Proposed Action) not believed to be eligible; awaiting concurrence from the State Historic Preservation Office (SHPO).
EO 11990, Protection of Wetlands	Requires federal agencies to avoid undertaking or providing assistance for new construction located in wetlands unless there is no practicable alternative, and all practicable measures to minimize harm to wetlands has been implemented.	Proposed Action will not involve new construction in wetlands.
EO 11988, Floodplain Management	Provides direction regarding actions of federal agencies in floodplains, and requires permits from state and federal review agencies for any construction within a 100-year floodplain.	Proposed Action will not involve construction in floodplains.
EO 12372, Intergovernmental Review of Federal Programs (as amended by EO 12416)	Requires federal agencies to consult with state and local governments when proposed federal financial assistance or direct federal development has an impact on interstate metropolitan urban centers or other interstate areas.	No federal financial assistance will be provided to Seattle or Washington as a result of this action. No development that might have an impact on Seattle will occur as part of the Proposed Action. Appropriate state and local officials invited to comment during scoping.
EO 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements	Requires federal agencies to plan for chemical emergencies. Facilities that store, use, or release certain chemicals are subject to various reporting requirements. Reported information is made available to the public.	No additional chemicals will be used or stored as a result of the Proposed Action.
EO 12898, Environmental Justice	Requires certain federal agencies, including the DoD, to the greatest extent practicable permitted by law, to make environmental justice part of their missions by identifying and addressing disproportionately high and adverse health or environmental effects on minority and low-income populations.	The Puget Sound Indian Tribes may be affected as a result of the Proposed Action.
EO 13007, Indian Sacred Sites	Requires federal agencies to accommodate access to, and ceremonial use of, sacred sites by practitioners and avoid adversely affecting the physical integrity of such sites.	No Indian sacred sites will be impacted by the Proposed Action.

Table 3-1. Applicable Regulations, Laws, and Executive Orders (continued)

Executive Orders		Impact on the Proposed Action
EO 13045, Protection of Children from Environmental Health and Safety Risks	Makes it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children. It also directs agencies to ensure that policies, programs, activities, and standards address such risks if identified.	The Proposed Action will not create environmental health and safety risks to children.
EO 13158, Marine Protected Areas	Requires federal agencies whose actions affect the natural and cultural resources protected by a marine protected area (MPA) to identify such actions, and, to the extent practicable and permitted by law, to avoid harming the natural and cultural resources that are protected by an MPA.	No MPAs identified within the Region of Influence (ROI).
EO 13175, Consultation and Coordination with Indian Tribal Governments	Requires federal agencies to have an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.	Requested comments from Native American tribes in area. Muckelshoot Indian Tribe requested consultation (regarding their usual and accustomed [U&A] fishing rights), which has taken place.
EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds	Requires federal agencies to take steps to protect migratory birds, including restoring and enhancing habitat, preventing or abating pollution affecting birds, and incorporating migratory bird conservation into agency planning processes whenever possible.	The Proposed Action will not impact migratory birds or their habitats.

Table 3-1. Applicable Regulations, Laws, and Executive Orders (continued)

Federal Public Laws and United States Codes		Impact on the Proposed Action
American Indian Religious Freedom Act, 42 United States Code (USC) 1996, Public Law (P.L). 95-341	Protects and preserves the rights of American Indians, Eskimos, Aleuts, and Native Hawaiians to exercise the traditional religions. These rights include, but are not limited to, access to sites, use and possession of sacred objects, and the freedom to worship through ceremony and tradition rites.	No such rights were raised as a result of scoping.
Antiquities Act of 1906, 16 USC 431-433, P.L. 59-209	Provides for the protection of historic and prehistoric ruins and objects of antiquity on lands owned or controlled by the federal government. Authorizes scientific investigation of antiquities on federal lands. Authorizes the establishment of national landmarks.	The Proposed Action will not impact historic and prehistoric ruins and objects of antiquity.
Archaeological and Historical Preservation Act, 16 USC 469	Protects and preserves historical and archaeological data. Requires federal agencies to identify and recover data from archaeological sites threatened by their actions.	The Proposed Action will not result in construction and therefore will not impact historical and archaeological data.
Archaeological Resources Protection Act of 1979, 16 USC 470 et seq., P.L. 96--95	Enacted to preserve and protect resources and sites on federal and Indian lands. Fosters cooperation between governmental authorities, professionals, and the public. Prohibits the removal, sale, receipt, and interstate transportation of archaeological resources obtained illegally from public or Indian lands.	No protected resources or sites identified on ISC Seattle. No construction will occur as a result of the Proposed Action.
Clean Air Act, 42 USC 7401-7671q, July 14, 1955, as amended	This Act, as amended, is known as the Clean Air Act (CAA) of 1970. The amendments made in 1970 established the core of the clean air program. The primary objective is to establish federal standards for air pollutants. It is designed to improve air quality in areas of the country, which do not meet federal standards and to prevent significant deterioration in areas where air quality exceeds those standards.	Determine impact, if any, as a result of the proposed project.

Table 3-1. Applicable Regulations, Laws, and Executive Orders (continued)

Federal Public Laws and United States Codes		Impact on the Proposed Action
Coastal Zone Management Act of 1972, 16 USC 1451-1464, P.L. 92-583	Establishes a policy to preserve, protect, develop, and, where possible, restore and enhance the resources of the Nation's coastal zone. Encourages and assists states through the development and implementation of coastal zone management programs.	Washington's Shoreline Management Act is equivalent to the Coastal Zone Management Act (CZMA). However, repeal of guidelines and pending resolution has left Washington with no guidelines in effect.
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 USC 9601-9675, P.L. 96-510, amended by Superfund Amendments and Reauthorization Act of 1986 (SARA), P.L. 99-499	Also known as "Superfund," provides for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and cleanup of inactive hazardous substances disposal sites. Also established a fund financed by hazardous waste generators to support cleanup and response actions.	MSST will be co-located with ISC Seattle and will comply with their response plan.
Department of Transportation Act, Section 4(f)	Requires the Department of Transportation (DOT) to avoid or mitigate impacts to public parks and wildlife areas when approving transportation programs or projects.	The Proposed Action will not impact public parks nor result in significant impacts to wildlife areas
Endangered Species Act of 1973, as amended, 16 USC 1531 et seq., P.L. 93-205	Protects threatened, endangered, and candidate species of fish, wildlife, and plants and their designated critical habitats. Under this law, no federal action is allowed to jeopardize the continued existence of an endangered or threatened species. The Endangered Species Act also requires consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) and the preparation of a biological assessment when such species are present in an area that is affected by government activities.	Threatened and endangered species occur in the ROI.
Federal Property and Administrative Services Act of 1949	Guides the process for transferring government property.	The Proposed Action will not result in the transfer of government property.
Federal Records Act	Requires federal agencies to preserve federal records of potential historic value.	No federal records will be impacted as a result of the Proposed Action.

Table 3-1. Applicable Regulations, Laws, and Executive Orders (continued)

Federal Public Laws and United States Codes		Impact on the Proposed Action
Federal Water Pollution Control Act (Clean Water Act), 33 USC 1251-1387	The Clean Water Act is a comprehensive statute aimed at restoring and maintaining the chemical, physical, and biological integrity of the nation's waters. Primary authority for the implementation and enforcement rests with the U.S. Environmental Protection Agency (EPA).	Determine impact by proposed project.
Fish and Wildlife Conservation Act Coordination Act, 16 USC 661 et seq., P.L. Chapter 55	The purpose of this Act is to ensure that wildlife conservation receives equal consideration and be coordinated with other features of water-resources development programs.	No waters or channels will be modified as a result of the Proposed Action.
Historic Sites Act of 1935, 16 USC 461-467, P.L. Chapter 593	Establishes a national policy to preserve for public use, historic sites, buildings, objects of national significance.	No historic sites have been identified at ISC Seattle.
Historical and Archaeological Data-Preservation, 16 USC 469 et seq., P.L. 93-291	Protects and preserves historical and archaeological data caused as a result of federal construction projects. Directs federal agencies to notify the Secretary of the Interior when the construction project may cause irreparable loss or destruction of significant resources or data. Provides a mechanism through which resources can be salvaged from a construction site.	No construction will occur as a result of the Proposed Action.
Lacy Act of 1900, 16 USC 701, 702; 31 Stat. 187, 32 Stat. 285	Under this law, it is unlawful to import, export, sell, acquire, or purchase fish, wildlife, or plants taken, possessed, transported, or sold: 1) in violation of U.S. or Indian law, or 2) in interstate or foreign commerce involving any fish, wildlife, or plants taken, possessed, or sold in violation of state or foreign law.	The Proposed Action will not impact the enforcement of this law.
Magnuson-Stevens Fishery Conservation and Management Act, as amended through October 11, 1996, 16 USC 1801 et seq., P.L. 94-265	Establishes regional fisheries councils that set fishing quotas and restrictions in U.S. waters. Federal agencies must consult with NMFS on all actions, authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat.	Puget Sound and Elliot Bay are within essential fish habitats.

Table 3-1. Applicable Regulations, Laws, and Executive Orders (continued)

Federal Public Laws and United States Codes		Impact on the Proposed Action
Marine Mammal Protection Act of 1972, 16 USC 1361 et seq., 1401-1407, 1538, 4107	Establishes a moratorium on the taking and importation of marine mammals including harassment, hunting, capturing, collecting, or killing or attempting the above actions. Requires permits for taking marine mammals. Requires consultations with USFWS and NMFS if impacts to marine mammals are possible.	The Proposed Action will not result in the taking of marine mammals. This does not mean that a strike will never occur.
Marine Protection, Research, and Sanctuaries Act of 1972, 33 USC 1401-1445, P.L.92-532	Regulates the dumping of materials into ocean waters. Provides for a permitting process to control the ocean dumping of dredged materials. Establishes the marine sanctuaries program.	Puget Sound is in the National Estuary Program. No dumping will be required as a result of the Proposed Action.
Migratory Bird Treaty Act 16 USC 703-712	The Migratory Bird Treaty Act implements various treaties and is for the protection of migratory birds. Under the Act, taking, killing, or possessing migratory birds is unlawful.	The Proposed Action will not impact migratory birds nesting, feeding, or migration habits.
National Environmental Policy Act of 1969 (NEPA), as amended; P.L. 91-190, 42 USC 4321 et seq.	Requires federal agencies to utilize a systematic approach when assessing environmental impacts of government activities. NEPA proposes an interdisciplinary approach in a decision-making process designed to identify unacceptable or unnecessary impacts to the environment.	The scope of the Proposed Action requires an Environmental Assessment.
National Historic Preservation Act, 16 USC 470 et seq.	Requires federal agencies to take account of the effect of any federally assisted undertaking or licensing on any district, site, building, structure, or object eligible or listed for inclusion in the National Register of Historic Places (NRHP). Provides for the nomination, identification (through listing on the National Register), and protection of historical and cultural properties of significance.	Building 7 (the only building to be effected by the Proposed Action) not believed to be eligible; awaiting concurrence from SHPO.
National Invasive Species Act of 1996, 16 USC 4701 et seq., P.L. 104-332	Reauthorizes and amends the Nonindigenous Aquatic Nuisance Prevention Control Act of 1990. Establishes ballast water information and requires guidelines to be issued for the Great Lakes.	The RBSs will not require ballast water.

Table 3-1. Applicable Regulations, Laws, and Executive Orders (continued)

Federal Public Laws and United States Codes		Impact on the Proposed Action
Noise Control Act of 1972, 42 USC 4901-4918, P.L. 92-574	Establishes a national policy to promote an environment free from noise that jeopardizes their health and welfare. Authorizes the establishment of federal noise emissions standards and provides information to the public.	Determine impact, if any, as a result of the proposed project.
Nonindigenous Aquatic Nuisance Prevention Control Act of 1990, 16 USC 4701 et seq., P.L. 101-646	Establishes aquatic nuisance species.	The RBSs will not require ballast water.
North Pacific Anadromodous Stocks Convention Act	Establishes U.S. representation; prohibits taking anadromous fish in the Convention Area of the North Pacific Ocean and provides enforcement and penalties.	The Proposed Action will not impact the enforcement of this convention.
North Pacific Halibut Act	Implements the U.S. and Canadian 1953 Convention for the Preservation of the Halibut Fishery of the Northern Pacific Ocean. U.S. regulations are enforceable by the DOT Secretary and the Secretary of the department in which the CG is operating.	The Proposed Action will not impact the enforcement of this Act.
Northwest Atlantic Fisheries Convention Act	Implements provisions of international conventions and establishes regulatory framework.	The Proposed Action will not impact the enforcement of this regulation.
Pacific Salmon Treaty Act and Sockeye Salmon Act	Both Acts address federal jurisdiction, the adoption of regulations, and enforcement for Pacific Salmon.	The Proposed Action will not impact the enforcement of these Acts.
Occupational Safety and Health Act	Establishes standards to protect workers, including standards on industrial safety, noise, and health standards.	The USCG has an equivalent protective measures for personnel.
Port and Waterways Safety Act	Sets vessel operating and towing safety requirements and sets out enforcement provisions.	The Proposed Action will not impact the enforcement of this Act.
Resource Conservation and Recovery Act, 42 USC 6901, P.L. 94-580	Establishes requirements for safely managing and disposing of solid and hazardous waste and underground storage tanks. Federal agencies must comply with waste management requirements.	The Proposed Action will comply with current ISC Seattle's program.

Source: USCG 2002e; USCG 2002f

3.2 Biological Resources

3.2.1 Definition of the Resource

Biological resources include native or naturalized plants and animals, and the habitats, such as wetlands, forests, and grasslands, in which they exist. Sensitive and protected biological resources include plant and animal species listed as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) or a state. Determining which species occur in an area affected by a proposed action may be accomplished through literature reviews and coordination with appropriate federal and state regulatory agency representatives, resource managers, and other knowledgeable experts.

Under the Endangered Species Act (ESA) (16 USC 1536), an "endangered species" is defined as any species in danger of extinction throughout all or a significant portion of its range. A "threatened species" is defined as any species likely to become an endangered species in the foreseeable future. The USFWS also maintains a list of species considered to be candidates for possible listing under the ESA. Although candidate species receive no statutory protection under the ESA, the USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and may warrant protection under the Act.

Biological resources also include wetlands. Wetlands are an important natural system and habitat because of the diverse biologic and hydrologic functions they perform. These functions include water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient cycling, wildlife habitat provision, unique flora and fauna niche provision, storm water attenuation and storage, sediment detention, and erosion protection. Wetlands are protected as a subset of the "waters of the U.S." under Section 404 of the Clean Water Act. The term "waters of the United States" has a broad meaning under the Clean Water Act and incorporates deep-water aquatic habitats and special aquatic habitats (including wetlands). The U.S. Army Corps of Engineers (USACE) defines wetlands as "those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 Code of Federal Regulations [CFR] 328).

3.2.2 Affected Environment

Protected and Sensitive Habitats

Protected and sensitive habitats are usually defined as those regions that are identified as marine sanctuaries, critical habitats, fisheries management areas, national parks, wildlife refuges, and estuarine

research reserve sites. These regions and areas can be under federal, state, and in some cases, local jurisdictions.

- Coast Guard missions include the protection of sensitive species and habitats. It fulfills its commitment to living marine resource protection through strategic plans and initiatives: National Marine Sanctuary Law Enforcement Program: among other activities, provides routine surveillance of marine sanctuaries concurrently with other USCG operations and provide specific, targeted, or dedicated law enforcement as appropriate
- Ocean Guardian: a long-range fisheries law enforcement strategy to support national goals for fisheries resource management and conservation
- Ocean Steward: the USCG's national strategy to help the recovery and maintenance of healthy populations of marine protected species
- Sea Partners: this is an environmental and outreach program designed to develop community awareness of maritime pollution issues and to improve compliance with marine environmental protection laws and regulations (USCG 2002g)

As part of the living marine resources protection initiatives described above, the USCG carries out additional activities that have direct and indirect benefits to sensitive species and habitats. For instance, the USCG has played and continues to play an active role in responding to oil spills and in facilitating the containment and cleanup process of such spills. In addition to assisting with oil spill prevention and cleanup, the USCG also facilitates research on protected species by allowing refuge, marine sanctuary, and National Marine Fisheries Service (NMFS) personnel to use assets as research platforms (USCG 1997). Puget Sound is in the National Estuary Program. Protection of the Sound's water quality and habitat for living resources is driven by two-year work plans, which are based on the Comprehensive Conservation and Management Plan for the Sound. Priorities include fixing and preventing on-site sewage system problems, protecting and restoring shellfish beds, reducing non-point pollution, improving habitat, protecting the shared waters of Puget Sound in Washington and the Georgia Basin in British Columbia, and education (EPA 2002).

There are several National Parks and Wildlife Refuges located in the Puget Sound area:

- Copalis National Wildlife Refuge
- Dungeness National Wildlife Refuge
- Grays Harbor National Wildlife Refuge
- Protection Island National Wildlife Refuge
- San Juan Islands National Historic Park
- San Juan Islands National Wildlife Refuge

Dosewallips State Park and Padilla Bay, a National Estuarine Research Area, are also located in the general area. In addition, the Washington State Department of Fisheries and Wildlife has designated two Salmon Management and Catch Reporting Areas near ISC Seattle. Area 10A are those waters easterly of a line from Duwamish head to Pier 91 (inner Elliot Bay). Area 80B is the designation for the freshwater geography for the Green River including the Duwamish waterway. Pier 36 is within Area 80B, just upstream of the 10A/80B line (USCG 2002h).

Marine Mammals

This section includes a brief description of marine mammals within the ROI. A number of factors may impact the distribution of marine mammals, including environmental, biotic, and human-generated impacts. Environmental factors may include chemical, climatic (i.e., El Niño), or physical (e.g., those related to the characteristics of a location). Biotic factors include the distribution and abundance of prey, competition for prey, reproduction, natural mortality, catastrophic events (i.e., die-offs), and predation. Human impacts include noise, hunting pressure, pollution and oil spills, habitat loss and degradation, shipping traffic, recreational and commercial fishing, oil and gas development and production, and seismic exploration. The interrelationships of these factors that can affect the location and temporary distribution of prey species. This, in turn, is the major influence on diversity, abundance, and distribution of marine mammals.

The USCG has a long-standard role in protecting marine mammals. It enforces all U.S. laws on all U.S. waters, including laws protecting marine mammals and sensitive species. The USCG enforces the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), the National Marine Sanctuaries Act, and a number of maritime Executive Orders. They also enforce other applicable federal and international laws. The USCG's Commandant Instructions (COMDTINSTs) include a number of policies, directions, and procedures that include specific rules to avoid impacts with marine mammals whenever possible. The USCG's Ocean Steward and Ocean Guardian programs specifically support these goals (USCG 2002b). On October 27, 1997, the USCG issued Coast Guard Vessel and Speed Approach Guidance regarding whales for vessels operating along the Pacific Coast. Briefly, this guidance directs the vessel to reduce speed when a whale has been sighted or was previously sighted within five nautical miles. It also recommends vessels travel at speeds appropriate, yet navigationally prudent to avoid collision, and if necessary reduce speeds to the minimum at which the vessel can be kept on course or come to a full stop. The guidance also prohibits approaching whales head on or approaching within 100 yards, unless assisting in the rescue of an endangered whale or performing duties to enforce the ESA or MMPA (USCG 1997).

There are several threatened and endangered species known to occur off the coast of Washington:

- Fin Whale (endangered species)
- Humpback Whale (endangered species)
- Pacific Right Whale (endangered species)
- Southern Sea Otter (threatened species)

Pacific population numbers of fin whales are uncertain. Fin whales are typically found in Pacific coastal waters in fall and spring and offshore in winter. The humpback is a commonly observed summer migrant in the Pacific coastal waters. The Pacific right whale is not the subject of much regulatory attention, and most sightings are of solitary individuals. They feed in coastal waters during the winter and fall. They can be found in near shore habitats from the Bering Sea to central Baja California (USCG 2002b).

Other mammals that are known to frequent the Washington coast are gray whales, orca whales, harbor porpoises, and seals. Gray whales migrate seasonally and are quite common off the Pacific Coast at certain times of the year. It is common for a few gray whales and orca whales to pass through Puget Sound and occasionally in Elliot Bay every spring on their way to the feeding waters off the coast of Alaska. They will usually enter the shallow waters in search of ghost shrimp before continuing their migration northward.

Fish

Living Marine Resource Protection is an important USCG mission. The USCG undertakes such activities as enforcing domestic fisheries laws, and ensuring the development of practical enforcement plans to protect, conserve, and manage these resources. As part of this mission, the USCG ensures the development of practical plans to protect, conserve, and manage these resources. The USCG also enforces domestic fisheries laws:

- Magnuson-Stevens Fisheries Conservation Act
- Pacific Salmon Fishing Program
- Endangered Species Act
- Marine Protection, Research and Sanctuaries Act
- National Fishery Management Program
- Fish and Wildlife Conservation Act
- North Pacific Anadromous Stocks Convention Act
- Lacey Act Amendments of 1981

USCG initiatives are:

- Ocean Steward (see Appendix F)
- Ocean Guardian (includes the Fisheries Enforcement Strategic Plan)

The Pacific Coast Fishery Management Council manages a large number and variety of fish. Many managed species are targeted for commercial fishing including 83 species of groundfish (i.e., rockfish, flatfish, sharks, skates, and roundfish), highly migratory species (i.e., tuna, swordfish, marlins, sailfish, and oceanic sharks), pacific salmonids (i.e., Chinook and Coho salmon), and coastal pelagics (i.e., herring, squid, anchovy, sardine, and mackerel) (USCG 2002b).

ISC Seattle is located at the mouth of the east waterway of the Duwamish River as it enters Elliot Bay, part of Puget Sound. Puget Sound is identified as an Essential Fish Habitat (EFH) by the State. In addition to Steelhead trout, three primary species of salmonids area found in the Duwamish: Puget Sound Chinook salmon (listed as threatened), Coho salmon, and chum salmon. Some of these fish present in the Duwamish are hatchery raised and released into the waterway as juveniles. The fish use the Duwamish waterway as a saltwater acclimation zone and/or as a rearing area. They can be found in both shallow waters near shore and in deeper offshore habitat. It is likely that the Duwamish River contains viable populations of wild Chinook salmon; therefore, it is possible that juvenile Chinook salmon utilize the ISC Seattle berthing slip while migrating to the ocean (USCG 2002h).

Although all of Puget Sound has been designated critical habitat for the Puget Sound Chinook salmon, a recent agreement between NMFS and the National Association of Home Builders (NAHB) will remove that designation for at least the next two years while NMFS performs a review of economic impacts. Additionally, NMFS is also reviewing the designation of the Chinook salmon in light of the 2001 federal judge ruling that they must also consider hatchery-raised fish (Vogel, personnel communication 2002).

Puget Sound bull trout (listed as threatened) also migrates through the area. The bull trout has a wide distribution with 35 subpopulations in the Coastal/Puget Sound area. Nineteen of these are found in the Puget Sound Basin. King County's major watersheds are known to provide habitat for a distinct population of bull trout; these subpopulations are important to the long-term survival of the larger Coastal/Puget Sound bull trout population (USCG 2002h).

Fishing is an important commercial, recreational, and subsistence resource for Indian tribes. Approximately 20 federally-recognized Indian tribes have treaty-reserved rights to fish in various locales comprising all of Puget Sound, which coincides with the overall mission area of the MSST. Related activities of the tribes in Puget Sound and its tributaries include fishing, fishery enforcement patrols, fishery and water quality research, and shellfish harvesting. Over the years, "treaty rights" have come to be interpreted as including the rights of tribal members to take a substantial portion of the overall catch of salmon, steelhead, Pacific whiting, sablefish, rockfish, albacore, halibut, sea urchin, and shellfish. In Puget Sound, the species of greatest interest to the tribes are salmon and steelhead.

Every year, each tribe makes a fishery management plan in cooperation with the State of Washington. Collectively, they estimate what the escapement (e.g., fish that go upstream) should be for species of interest and each waterway – based on research and past catch. They coordinate future catch limits and dates, times, and places, (i.e., "openings"), that commercial (tribal and non-tribal) fishers can fish. Puget Sound Indian tribes have exclusive rights to commercial net fishing in Puget Sound and have full authority to make and enforce their own fisheries management plans for places where they have usual and accustomed (U&A) rights.

Within Puget Sound, ISC Seattle's Pier 36, the MSST homeport, is located within and adjacent to Elliott Bay. Elliott Bay is included in the U&A fishing areas of the Muckleshoot and Suquamish tribes. During tribal commercial salmon openings, tribe members fish with large nets from vessels in designated areas of Puget Sound, including directly in front of Pier 36. Openings in proximity to Pier 36 generally last for periods of 12 hours over just a few days at a time. Vessels and gear displaced before or while net fishing may lose the opportunity to fish during that time period.

The Muckleshoot, Suquamish, and Tulalip tribes and the Northwest Indian Fishery Commission informed the USCG of concerns about being displaced or interrupted from U&A fishing places by activities related to the protection of U.S. Navy vessels and fears of possible infringement on fishing rights. The Muckleshoot tribe again expressed their concern in response to the USCG's Notice of Intent Prepare an Environmental Assessment for the establishment of the MSST in Puget Sound. Comment letters from Indian groups emphasized the need for good communication and recommended that, where possible, non-emergency vessel protection and other security related activities be scheduled and located to avoid conflict with Indian fishing activities. They also requested that the USCG designate a single point of contact to facilitate resolution of tribal concerns on a case-by-case basis. All parties noted that, in the past when the USCG has had advance notice of tribal fishing openings, navigation conflicts have been largely avoided. However, increasing vessel traffic in the Sound presents an even greater challenge.

The Muckleshoot Tribe's letter in response to the MSST Notice of Intent requested Government-to-Government consultation. Informal consultation was held via telephone on May 20, 2002 between representatives of the USCG, Mr. Reich (representing the Muckleshoot tribe), and other tribal officials. The USCG explained that the MSST is not a program that will establish new regulated zones in Puget Sound and therefore will not designate areas where tribal fishing would not be permitted. The MSST is comprised of boats and personnel that can be deployed by existing authorities in Puget Sound to accomplish their own marine protection missions. The USCG will make certain that the Tribes have a contact to address their concerns. The Tribe will direct all concerns first to the tribal liaison officer of the Captain of the Port (e.g., Marine Safety Office Puget Sound) and second to the USCG District Thirteen tribal liaison officer. The USCG also stated that they would continue to consult as necessary.

Coastal and Other Birds

In enforcing the ESA, the USCG also protects endangered and threatened bird species. The USCG must also comply with the Migratory Bird Treaty Act and the EO on Responsibilities of Federal Agencies to Protect Migratory Birds (USCG 2002b).

Thirteen threatened and endangered coastal birds can be found in the Pacific Coastal region (USCG 2002b). ISC Seattle is located within the range of the American bald eagle and the American peregrine falcon (both listed as threatened). Approximately a dozen nesting pairs of bald eagles are within the city limits. Peregrine falcons are also known to nest within at least one of the downtown office buildings. Although it is possible that these raptors transit the area, ISC Seattle does not contain suitable nesting or foraging habitat (USCG 2002h).

3.3 Water Resources

3.3.1 Definition of the Resource

Water resources include surface water, storm water, groundwater, floodplains, and wetlands. Federal laws and regulations that the USCG enforces and must comply with that are relevant to surface water include the Oil Pollution Act, portions of the Clean Water Act, and the Marine Protection, Research and Sanctuaries Act. The ROI for water resources includes Puget Sound and Elliot Bay.

Surface Water

Surface water resources consist of lakes, rivers, and streams. Surface water is important for its contributions to the economic, ecological, recreational, and human health of a community or locale. Storm water flows, which may be exacerbated by high proportions of impervious surfaces associated with buildings, roads, and parking lots, are important to management of surface water. Storm water also is important to surface water quality because of its potential to introduce sediments and other contaminants into lakes, rivers, and streams.

Impacts to surface water resources can include accidental releases, nonpoint discharges carried by storm water runoff, and point discharges from permitted facilities. Impacts from sources on land can include releases of petroleum products, heavy metals, and other toxic compounds related to maintenance activities. Outputs in port also include spills from refueling, offloading wastes, or handling hazardous materials.

Groundwater

Groundwater is an essential resource often used for potable water consumption, agricultural irrigation, and industrial applications. Groundwater typically may be described in terms of its depth from the surface, aquifer or well capacity, water quality, surrounding geologic composition, and recharge rate. Groundwater is rain water or snow melt that has filtered into (or recharged) the ground and then stays beneath the surface.

Floodplains

Floodplains are areas of low-level ground along a river or stream channel. These lands may be subject to periodic or infrequent inundation due to rain or melting snow. Risk of flooding is influenced by local topography, the frequency of precipitation events, and the size of the watershed above the floodplain. Flood potential is evaluated by the Federal Emergency Management Agency (FEMA), which evaluates the floodplain for 100- and 500-year flood events. Federal, state, and local regulations often limit floodplain development to passive uses such as recreational and preservation activities in order to reduce the risks to human health and safety and minimize cost to replace or repair repetitively damaged infrastructure.

Wetlands

"Wetlands" is a general term used to describe areas that are neither fully terrestrial nor fully aquatic. Wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are important for many reasons. Some provide critical habitat for migratory waterfowl, while others provide storage capacity for storm water retention. Some act as filters, removing and sequestering contaminants that might otherwise find their way into receiving bodies of water.

Wetlands are protected by Section 404 of the Clean Water Act, which imposes a requirement to obtain a permit from the USACE prior to taking any action that would result in the dredging or filling of wetlands. Moreover, EO 11990, *Protection of Wetlands*, issued on May 24, 1977, requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agencies responsibilities for managing and disposing of federal lands and facilities.

3.3.2 Affected Environment

The ISC at the Port of Seattle is located at the mouth of the east waterway of the Duwamish River and Elliot Bay within Puget Sound. Puget Sound is the second largest estuary in the U.S. with 3,790 kilometers of shoreline. The average difference between high and low tide is approximately 3.7 meters at

Seattle. This difference is large because of the volume of water that continually moves in and out of the Sound with the tide. The direction and magnitude of water movement in the bay is influenced by the tidal state, tidal range, and river discharge. Currents are generally weak to moderate.

Surface Water.

Facilities adjacent to navigable water bodies that handle fuel or other hazardous materials are required to prepare and implement Spill Prevention Control and Countermeasures Plans. These plans describe the facilities response to spills. The MSST would comply with ISC's existing Spill Prevention Control and Countermeasures Plans. The Washington Department of Ecology rates the surface water quality of Elliot Bay as Class A (excellent) (USCG 2002h).

The population around Puget Sound has been growing steadily which means that the acreage of impervious surface area has been increasing. Population is expected to grow to 2 million by 2020 (PSWQAT 2002). Storm water runoff from developed areas is a significant water pollution problem in the Sound because of the influx of contaminants. The ISC manages storm water in compliance with a National Pollution Discharge Elimination System (NPDES) Permit under a Multi-Sector General Permit (Scala, personnel communication 2002).

Groundwater.

Groundwater is the major source of drinking water for citizens in the eastern, southern, and western (Vashon and Maury Islands) parts of King County. Other sources of drinking water are the City of Seattle, Public Utilities, and purveyors who buy wholesale water from Seattle. ISC Seattle obtains its potable water from the City of Seattle's Cedar Reservoir (Vogel, personnel communication 2002).

Floodplains.

ISC Seattle is not located in a 100- or 500-year floodplain (Vogel, personnel communication 2002).

Wetlands.

There are no wetlands on ISC Seattle (Vogel, personnel communication 2002). According to the Puget Sound Water Quality Plan, 70 percent of the tidally influenced wetlands in Puget Sound have been lost in the past century. In addition, 33 percent of the marine shorelines have been modified (PSWQAT 2002).

3.4 Cultural and Historical Resources

3.4.1 Definition of the Resource

Several federal laws and regulations govern protection of cultural resources, including the National Historic Preservation Act (NHPA) (1966), the Archaeological and Historic Preservation Act (AHPA) (1974), the American Indian Religious Freedom Act (1978), the Archaeological Resources Protection Act (ARPA) (1979), and the Native American Graves Protection and Repatriation Act (1990).

The Proposed Action described is subject to Section 106 of the NHPA, as amended in 1992 (16 United States Code [USC] 470 et seq.). This EA will be submitted to the State Historic Preservation Office (SHPO) for review and comment to fulfill USCG's obligations under section 106 (36 CFR 800.8I, Use of the NEPA Process for Section 106 Purposes).

Historic and Cultural resources is a generic phrase which includes historic properties as defined by NHPA and archeological, social, and historic resources besides those eligible for the National Register of Historic Places (NRHP). Folk life, traditions, religious practices, and other social institutions such as community resources and life ways are included in the phrase "historic and cultural resources."

Historic properties as defined by NHPA are any prehistoric or historic districts, sites, buildings, structures, or objects that are 50 years old or older and are included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. Historic properties may be eligible for the NRHP even if they are not yet 50 years old if they are of exceptional significance in American history. Historic properties include artifacts, records, and remains that are related to and located within such properties and properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria. The term eligible for inclusion in the NRHP includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the NRHP criteria.

Properties are considered eligible for the NRHP if they are significant in American history, architecture, archeology, engineering, or culture, and possess integrity of location, design, setting, materials workmanship, feeling, and association. They must meet one or more of the four NRHP criteria:

- They are associated with events that have made a significant contribution to the broad patterns of our history.
- They are associated with the lives of persons significant in our past.
- They embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction.

- They have yielded, or may be likely to yield, information important in prehistory or history.

Archeological resources are any subsurface or underwater material remains of human life or activities which are capable of providing scientific or humanistic understanding of past human life, behavior, and cultural adaptation. ARPA applies to archeological resources that are at least 100-years old. NHPA generally applies to archeological resources that are 50-years old or greater, but NHPA may apply to younger archeological resources if such resources are of special importance as specified in 36 CFR 60.4.

Short History of the Area of Potential Effect

Prior to Puget Sound's Euro-American settlement, Salish natives camped in what would become downtown Seattle during regular treks between Puget Sound and Lake Washington via the Duwamish and Black rivers. The members of the Duwamish and Suquamish Tribes hunted in the forests bordering today's Elliott Bay, fished for abundant salmon in its waters, and gathered shellfish on beaches and on the tideflats around the mouth of the Duwamish River (HistoryLink 2002).

Great Britain ceded its claim south of the present United States-Canadian border in 1846, and U.S. citizens began pouring west. Seattle's first U.S. settlers arrived in the fall of 1851 establishing a trading post on West Seattle's Alki Beach and farms at the mouth of the Duwamish River (HistoryLink 2002).

In 1895, an ambitious plan of public works was proposed which included a canal from Elliott Bay to Lake Washington, filling in the tide flats south of downtown Seattle, and straightening the Duwamish River. In 1901, canal construction began, and the soil from Beacon Hill was sluiced into the tideflats. Work stopped on the project due to cave-ins, but filling the wetlands continued with soil from regrades in Seattle. In 1909, Seattle formed the Duwamish Waterway Commission to sell bonds and to rechannel the river. A deeper, straighter river would allow ships to navigate to the industries envisioned for the reclaimed land, and would alleviate the flooding that plagued the area (HistoryLink 2002).

On October 14, 1913, the straightening of the Duwamish River into the Duwamish Waterway began. Twenty million cubic yards of mud and sand were moved until the bends of the river were filled and the main channel was deepened. Soils from the surrounding hills were used to create Harbor Island at the mouth of the river. Industry expanded south from Seattle on the newly reclaimed land. By 1920, the Duwamish Waterway had been extended to a depth of 50 feet for 4½ miles (HistoryLink 2002).

3.4.2 Affected Environment

The parcel of land occupied by ISC Seattle was originally part of the Duwamish River; it was filled in during the 1910s. There are two primary buildings on the site: Building 1, constructed in 1928 by the Admiral Steamship Company, and Building 7, the Seattle Army Terminal or Terminal of Embarkation (a

warehouse) constructed in the 1940s by the U.S. Army. The oldest structure, Building 1, was evaluated for eligibility for listing on the NRHP in 1990. It was determined not to be eligible because it "no longer maintains good historical integrity" (DCD 1990). The U.S. Army constructed Building 7 in 1941. It was designated "Warehouse No. 1" of the Seattle Port of Embarkation. Building 7 is a four-story irregular shaped structure of cast-in-place concrete, atop a foundation of wood piling. It has an interior floor space of 380,481 square feet. The architecture of Building 7 is an example of the heavy concrete construction during the early 40's. The massive concrete look with rows of high windows, series of high roll-up doors with loading docks, one can only characterized this building as a huge warehouse building. The property was used until 1957 by the Sixth Army for receiving, temporary storage, and shipment of military materiel to and from overseas. In addition, the selective service operated an induction center in the building in the 50s and 60s.

Since its original construction, the building has undergone numerous remodels and renovations. In 1958, USACE renovated the building, constructing offices and laboratories. In 1965, the General Service Administration renovated portions of the first floor for offices and a motor pool for government vehicles. In the 50s and 60s, the selective service operated an induction center in Building 7. In the 1970s, the USCG renovated the western portion of the first floor into comptroller offices, shipping and receiving. They also renovated the western portion of the fourth floor, creating a small arms firing range. In the 1980s, USACE renovated the southeast portion of the first floor for a homeless shelter. Many federal agencies have utilized various portions of Building 7 for storage.

Over the years, changes have also been made to the exterior of Building 7:

- Nine of the 12 roll-up doors have been infilled along the south face.
- A new entrance was created for the homeless shelter along the south face.
- The windows on the fourth floor on the south face were infilled and ventilation ducts were installed on the west face to accommodate the USCG firing range that was constructed on the fourth floor.
- The shipping and receiving center was constructed, with new loading docks, a canopy, and a new opening cut into the building along the west face.
- A new entrance was created for the Comptroller offices along the north face. In addition, two roll up doors were infilled and new windows were installed.
- Many windows and doors have been replaced near the main entrance along the north face.
- Two rollup doors have been infilled and a third has been blocked with installation of a large fuel storage tank with secondary containment at the former loading dock on the north face.
- Most windows on the first and second floor have been replaced along the east face. In addition, several windows have been replaced by ventilation ductwork on the fourth floor (Vogel 2002).

The USCG does not believe that Building 7 meets any of the NRHP register criteria. Although building 7 was used to store military materials, we do not believe that this constitutes an association with events that have made a significant contribution to the broad patterns of our history. As far as the USCG has been able to ascertain, Building 7 is not associated with the lives of persons significant in our past. While Building 7 may have once embodied the distinctive characteristics of a type, period, or method of construction for warehouses built in the 1940s, the USCG believes the many changes that have been made to the building have destroyed its original integrity. We do not believe that the building represents the work of a master, or possesses high artistic values. Criteria (d), "they have yielded, or may be likely to yield, information important in prehistory or history" does not apply. Based on the information above, the USCG has determined that Building 7 is not eligible for the NRHP. Due to the many changes the building has been subjected to over the years, we also believe the integrity of the original building has been lost; therefore, the USCG believes that Building 7 is not eligible for the NRHP. The USCG is currently consulting with the Washington State Historic Preservation Officer on the eligibility and effects of the Proposed Action on Building 7.

Treaty Rights

The Muckleshoot Indian Tribe is a federally recognized Indian Tribe with a reservation located in southern King and northern Pierce counties. In the mid-1850s the ancestors of the present-day Muckleshoot people negotiated two treaties with the U.S.: the Treaty of Point Elliot, 12 Stat. 927, and the Treaty of Medicine Creek, 10 Stat. 1132. In the treaties, the Muckleshoot people, along with other Western Washington tribes, reserved the permanent right to take fish at usual and accustomed fishing places outside their reservations. The adjudicated usual and accustomed grounds and stations of the Muckleshoot Indian Tribe include Elliot Bay and the Duwamish River.

Other Historic Properties

There are a number of historic properties in and around the Port of Seattle and Puget Sound. In order to make this a manageable list, only those properties located on or adjacent to the shores are identified in Table 3-2.

3.5 Air Quality and Climate

3.5.1 Definition of the Resource

The air quality in a given region is measured by the concentration of various pollutants in the atmosphere. The Clean Air Act (CAA) National Ambient Air Quality Standards (NAAQS) have been established by the EPA for six criteria pollutants including: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than ten micons (PM_{10}), and lead (Pb). The measurements of

Table 3-2. Historic Properties Located on or Adjacent to the Shores of the Port of Seattle and Puget Sound

Name	Washington Heritage Register	National Register (NR)/ National Historic Landmark (NHL)
Navy Yard Puget Sound		NHL
Puget Sound Radio Station Historic District	Yes	NR
Ferry Service to West Seattle and Puget Sound Navigation Company Site	Yes	----
Puget Sound Cooperative Colony (Port Angeles)	Yes	-----
Puget Sound Navy Shipyard Shore Facilities	Yes	-----
Bremerton Navy Yard		NHL
Alki Point Light Station	Yes	Determination of Eligibility
Pike Place Public Market Historic District	Yes	NR
Washington State Public Boat Landing Facility	Yes	NR
West Point Light Station	Yes	NR
Great White Fleet Disembarkation Site	Yes	-----
Hospital Ship "Idaho"	Yes	-----
SS San Mateo	Yes	NR
USS Nebraska Launching (Skinner and Eddy Shipyard)	Yes	NR
Yesler Wharf and Decatur Anchorage Site	Yes	----

Source: WSOA 2002

these "criteria pollutants" are expressed in units of parts per million (ppm) or in units of micrograms per cubic meter ($\mu g/m^3$). The CAA directed EPA to develop, implement, and enforce strong environmental regulations that would ensure cleaner and healthier ambient air quality. In order to protect public health and welfare, the EPA developed numerical concentration-based primary and secondary standards for these criteria pollutants. NAAQS represent maximum levels of background pollution that are considered safe, with an adequate margin of safety to protect public health and welfare. O_3 is not emitted directly from stationary, mobile, or area pollution sources. Rather, it is a product of photochemically reactive compounds such as nitrogen oxides (NO_x) and volatile organic compounds (VOC). These compounds are inventoried and quantified as precursors of O_3. Air quality in a region is a result of not only the types and quantities of atmospheric pollutants and pollutants sources in an area, but also surface topography, and the size of the air basin, and the prevailing meteorological conditions.

The State of Washington adopted the NAAQS and promulgated additional state ambient air quality standards (AAQS). The State of Washington established state AAQS standards for sulfur oxides (SO_x) that are more stringent than the federal primary standards. Table 3-3 presents the primary and secondary NAAQS and State of Washington AAQS.

Table 3-3. National and State Ambient Air Quality Standards

Pollutant	Standard Value		Standard Type
Carbon Monoxide (CO)			
8-hour Average	9 ppm[a]	(10 mg/m^3) [b, c]	Primary & Secondary
1-hour Average	35 ppm	(40 mg/m^3) [c]	Primary
Nitrogen Dioxide (NO_2)			
Annual Arithmetic Mean	0.053 ppm	(100 μg/m^3) [b, d]	Primary & Secondary
Ozone (O_3)			
1-hour Average[e]	0.12 ppm	(235 μg/m^3) [e]	Primary & Secondary
8-hour Average[e]	0.08 ppm	(157 μg/m^3) [e]	Primary & Secondary
Lead (Pb)			
Quarterly Average		1.5 μg/m^3	Primary & Secondary
Particulate ≤ 10 microns (PM_{10})			
Annual Arithmetic Mean		50 μg/m^3	Primary & Secondary
24-hour Average		150 μg/m^3	Primary & Secondary
Sulfur Dioxide (SO_2)			
Annual Arithmetic Mean	0.03 ppm	(80 μg/m^3) [e]	Primary
24-hour Average	0.14 ppm	(365 μg/m^3) [e]	Primary
3-hour Average	0.50 ppm	(1300 μg/m^3) [e]	Secondary
12-month Arithmetic Mean (SO_x)	0.02 ppm	60 μg/m^3	State of Washington
24-hour Average (SO_x)	0.10 ppm	260 μg/m^3	State of Washington

Notes:

[a] ppm – parts per million

[b] Parenthetical value is an approximately equivalent concentration.

[c] mg/m^3 – milligrams per cubic meter

[d] μg/m^3 – micrograms per cubic meter

[e] In July of 1997, the 8-hour ozone standard was promulgated and the 1-hour ozone standard was remanded for all areas, excepting areas that were designated non-attainment with the 1-hour standard when the ozone 8-hour standard was adopted. In July of 2000, the ozone 1-hour standard was re-instated as a result of the federal lawsuits that were preventing the implementation of the new 8-hour ozone standard. As of December of 2001, EPA estimated that the revised 8-hour ozone standard rules will be promulgated in 2003-2004. In the interim, no areas can be deemed to be definitively non-attainment with the new 8-hour standard.

The CAA Section 176 I (1) prohibits federal agencies from undertaking projects that do not conform to an EPA-approved SIP in non-attainment areas. In 1993, the EPA developed the General Conformity Rule, which specifies how federal agencies must determine CAA conformity for sources of non-attainment pollutants in designated non-attainment and maintenance areas. A maintenance area is one that has met federal air quality standards, thus removing it from non-attainment status. This rule and all

subsequent amendments may be found in 40 CFR 51 Subpart W and 40 CFR 93 Subpart B. Through the Conformity Determination process specified in the final rule, any federal agency must analyze increases in pollutant emissions directly or indirectly attributable to the Proposed Action. In addition, they may need to complete a formal evaluation that may include modeling for NAAQS impacts, obtaining a commitment from the state regulatory agency to modify the State Implementation Plan (SIP) to account for emissions from the Proposed Action, and/or provision for mitigation for any significant increases in non-attainment pollutants. SIPs are the regulations and other materials for meeting clean air standards and associated CAA requirements. Since the Proposed Action at the Port of Seattle occurs in an attainment area, the General Conformity Rule does not apply. No further conformity analysis is required.

3.5.2 Affected Environment

Air Quality

The USCG Facility at the Port of Seattle is located in King County, Washington within the Puget Sound Intrastate Air Quality Control Region (AQCR) No. 229. This AQCR, which includes the counties of King, Kitsap, Pierce, and Snohomish, is classified as in attainment, unclassifiable or better than national standards for all criteria pollutants (40 CFR Part 81.32). The Puget Sound Clean Air Agency (PSCAA) regulated emissions for this AQCR. ISC Seattle is not required to have an air permit for operations, nor are they required to notify the PSCAA when a cutter or boat is going to light up (start its engine). Table 3-4 presents the current air emissions inventory data for AQCR 229.

Table 3-4. Current AQCR Annual Emissions Inventory Data for AQCR 229

	NO2 (tpy)	VOC (tpy)	CO (tpy)	SO2 (tpy)	PM10 (tpy)
Area Source s	151,521	159,076	981,659	19,281	72,213
Point Sources	14,067	7,034	25,289	4,966	2,602
Total Emissions Inventory (tpy)	165,588	166,110	1,006,948	24,247	74,815

Source: EPA 1999
Note: tons per year (tpy)

Climate

King County has a marine climate characterized by mild rainy winters and warm dry summers. Annual precipitation for Seattle is approximately 38 inches with the majority of the precipitation occurring from October to April. The average annual temperature is 59.4 degrees Fahrenheit (°F). Table 3-5 presents the monthly temperature and precipitation data for Seattle, WA.

Table 3-5. Local Climate Summary for the City of Seattle

Month	Maximum Temperature Normals (°F)	Precipitation Normals (Inches)
January	45.0	5.38
February	49.5	3.99
March	52.7	3.54
April	57.2	2.33
May	63.9	1.70
June	69.9	1.50
July	75.2	0.76
August	75.2	1.14
September	69.3	1.88
October	59.7	3.23
November	50.5	5.83
December	45.1	5.91

Source: NOAA 1990

3.6 Noise

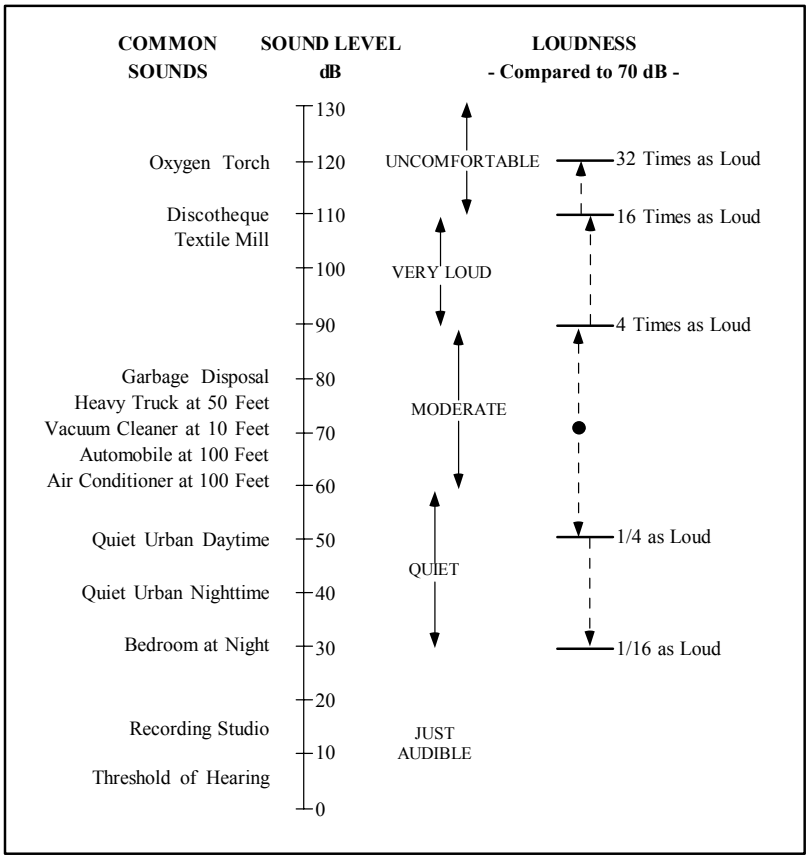
3.6.1 Definition of the Resource

This section defines noise standards and methodology, discusses the impacts of noise on humans and marine mammals, and describes the existing noise environment in the ROI. The ROI for the noise environment is the Port of Seattle, Puget Sounds and the land immediately adjacent to these bodies of water.

Webster's dictionary defines noise as "sound or a sound that is loud, disagreeable, or unwanted." However, the definition of noise is highly subjective. To some people the roar of an engine is satisfying or thrilling; to others it is an annoyance. Loud music may be enjoyable or a torment, depending on the listener and the circumstances. While no absolute standards define the threshold of "significant adverse impact," there are common precepts about what constitutes adverse noise in certain settings, based on empirical studies. Noise is "adverse" in the degree to which it interferes with activities such as speech, sleep, and listening to the radio and television and the degree to which human health may be impaired. Noise can also cause "adverse impacts" to marine mammals, depending on the type of noise and duration. Noise can result in stressful situations that disrupt sleeping, reproduction, feeding habits, and communication.

Overview of Noise Standards and Terminology

Noise is customarily measured in decibels (dB), a logarithmic unit that accounts for large variations in amplitude and is the accepted standard unit measurement of sound. Figure 3-4 depicts dB noise levels associated with some typical activities. In order to evaluate the total community noise environment, a time-averaged noise level, or day-night average sound level (DNL), has been developed. DNL is the average A-weighted acoustical energy during a 24-hour period with a 10 dB penalty added to nighttime levels (between 10 p.m. and 7 a.m.). The 10 dB penalty is accounts for the intrusiveness of events occurring during this period when ambient noise levels are generally low. Use of the DNL noise metric is endorsed by the EPA and has been adopted by other federal agencies.



Source: Harris 1979

Figure 3-4. Typical A-weighted Decibel Scale of Common Sounds

Ambient sound levels vary based upon the setting in which they are measured. For example, in a wilderness setting, ambient sound levels range from DNL 20 to 30 dB; in residential areas, they range between DNL 30 to 50 dB; and in urban residential areas, they range between DNL 60 to 70 dB (FICON 1992). In outdoor areas where quiet is a basis for use, "there is no reason to suspect that the general

population would be at risk from any of the identified effects of noise" (i.e., activity interference or annoyance) when sound levels are DNL 55 dB or less (EPA 1978). The American National Standards Institute (ANSI) has also suggested that land uses in "extensive natural wildlife and recreation areas" are likely to be considered compatible with DNL 60 dB or less (ANSI 1990). The methodology employing DNL and percent highly annoyed (%HA) has been successfully used throughout the U.S. in a variety of settings, ranging from urban to rural (see Appendix E for further explanation on noise metrics).

Regulatory Framework for Noise and Standard Operating Procedures

Most states and territories have developed land use plans and regulations that incorporate noise thresholds and standards in accordance with the Noise Control Act (42 USC 4901,4918). The State of Washington has established noise limitations (Washington Administrative Code [WAC] 173-60-040). This code establishes environmental designation for noise abatement (EDNA) areas (e.g., an area or zone within which maximum permissible noise levels are established). There are three classes of EDNAs:

- Class A EDNA – Lands where human beings reside and sleep.
- Class B EDNA – Lands involving uses requiring protection against noise interference with speech.
- Class C EDNA – Lands involving economic activities of such a nature that higher noise levels than experienced in other areas is normally to be anticipated.

WAC 173-60-040 states: "No person shall cause or permit noise to intrude into the property of another person which noise exceeds the maximum permissible noise levels set forth below in this section. The noise limitations established are as set forth in the Table 3-6 after any applicable adjustments provided for herein are applied.

Table 3-6. Maximum Permissible Noise Levels

EDNA of Noise Source	EDNA of Receiving Property		
	CLASS A	CLASS B	CLASS C
CLASS A	55	57	60
CLASS B	57	60	65
CLASS C	60	65	70

Source: WSOE 2002

Between the hours of 10:00 p.m. and 7:00 a.m., the noise limitations of the foregoing table shall be reduced by 10 dBA for receiving property within Class A EDNAs. At any hour of the day or night the applicable noise limitations above may be exceeded for any receiving property by no more than:

- 5 dBA for a total of 15 minutes in any one-hour period
- 10 dBA for a total of 5 minutes in any one-hour period
- 15 dBA for a total of 1.5 minutes in any one-hour period

The USCG cooperates with local governments or the host agency to ensure that the facilities comply with local noise standards and land use regulations.

For homeport facilities, as is the case at ISC Seattle, USCG NEPA Implementing Procedures (COMDTINST M16475.1-D) require a discussion of the existing conditions in the surrounding communities, including noise regulations. Additionally, the USCG Safety and Environmental Health Manual (COMDTINST M5100.47) establishes requirements for noise, including compliance with local noise ordinances, and for identifying and assessing hazardous noise sources.

Human Response to Noise

Human response to noise varies according to the type and characteristics of the noise source, distance between source and receptor, receptor sensitivity, and time of day. Most people are exposed to sound levels of 50 to 55 dB (DNL) or higher on a daily basis. Studies specifically conducted to determine noise impacts on various human activities show that about 90 percent of the population is not significantly bothered by outdoor sound levels below 65 dB (DNL) (USDOT 1980). Studies of community annoyance in response to numerous types of environmental noise show that DNL correlates well with impact assessments and that there is a consistent relationship between DNL and the level of annoyance.

Human hearing varies in sensitivity for different sound frequencies. The ear is most sensitive to sound frequencies between 800 and 8,000 Hertz (Hz) and is least sensitive to sound frequencies below 400 Hz or above 12,500 Hz. Several different frequency-weighting metrics have been developed using different dB adjustment values. The most commonly used decibel weighting schemes are the A-weighted and C-weighted scales. The characteristics of sound include parameters such as amplitude, frequency, and duration.

Marine Mammal Response to Noise

Orca and gray whales are often seen within Puget Sound, occasionally within Elliot Bay. They, along with the common harbor seals and California sea lions, are protected under the MMPA. Noise is recognized as a disturbance to whales. Increasingly, attention is being paid to the impacts on whales of anthropogenic (human-generated) noise sources, especially those associated with the military (ONR 2000), as these sources tend to be much louder and can be widespread (Richardson, et al 1995). In addition to human-generated noise, there are numerous natural sound sources in the world's oceans, such as earthquakes,

lightening strikes, sea ice activity, precipitation, and waves. Also contributing to the ocean's noise environment are biological noises from other marine organisms, including many whale species.

In ocean acoustics, the convention chosen for a reference pressure level is one microPascal (1μPa) (ONR 2000; Richardson, et al 1995). This unit differentiates dB in water rather than air. The total ambient noise in the open ocean is about 74 dB-referenced 1μPa (ONR 2000). This ambient noise level is composed of natural and human-generated sounds. Human-generated sound comes from a variety of sources, including vessel traffic, geologic exploration, military projects, and aircraft. Sound radiated by the many large ships throughout the world's oceans is the single largest contributor to the increased sound levels (ONR 2000). The effects of these vessels are both local, affecting specific limited areas, and global, contributing to an overall increase in ambient noise. Noise levels throughout the world's ocean at frequencies below 500 Hz have increased over the last three decades (Richardson, et al 1995).

Noise levels associated with supertankers and containerships are 180 to 190 dB-referenced as 1μPa. The CG vessels are considerably smaller, with much smaller engines, so they do not significantly contribute to this type of noise (USCG 2002b).

Existing Noise Outputs for Ships

Vessels vary greatly in their noise output. Vessel size, hull construction, speed, maintenance, and other factors all affect the noise a vessel produces. Generally, as the size, load, and speed of a vessel increase, so does the noise it generates. Vessel noises, caused by the turning of the screws, engine operations, and onboard machinery, generally fall in a range of 5 to 2,000 Hz, with highest intensities below 100 Hz. Larger USCG cutters may generate source pressures of 160 to 170 dB-referenced 1μPa at one meter. A low frequency sound attenuates with distance to about 155 dB referenced 1μPa at about 100 yards from the source and to about 120 dB referenced 1μPa at about two miles from the source and also depends on the physical oceanic environment (e.g., temperature and salinity). Table 3-7 lists sound pressure source levels for various vessels (Richardson, et al 1995; USCG undated).

Table 3-7. Underwater Sound Pressure Levels for Various Vessels

Vessel (length) and Description	Frequency	Source Level (dB referenced 1μPa-meter)
Outboard drive – 23 feet (2 engines, 80 horsepower each)	630, 1/3 octave	156
Twin Diesel – 112 feet	630, 1/3 octave	159
Small Supply Ships – 180 to 279 feet	1000,1/3 octave	125-135 (at 50 meters)
Freighter – 443 feet	41, 1/3 octave	172

Source: Richardson, et al 1995
Note: CG cutters range from 110 to 387 feet. These underwater sound pressure levels cannot be directly compared to airborne decibel levels, such as those described in Table 3.9-1.

3.6.2 Affected Environment

Currently the USCG units stationed in the Port of Seattle are adjacent to compatible areas, zoned industrial or commercial. The Port of Seattle is equipped with a variety of piers that meet the needs of roll-on/roll-off, break bulk cargo, trawlers recreation, commercial fishing, and other large vessels. The Port of Seattle, one of the major transportation centers of the world, services a major portion of the northwest. USCG facilities are located within the Port of Seattle industrial and commercial area.

Noise produced by water vessels and supporting facilities while home ported or in transit to off-shore areas can combine with other noise sources to affect nearby communities and natural resources. The Seattle, Washington USCG facilities are bordered by industrial and commercial areas as shown in Figure 3-2. The USCG has established guidelines and developed cooperative agreements to mitigate impacts on neighboring communities. Federal and state laws and local ordinances establish standards and limitations for noise output from ports, airfields, heliports, helipads, power generating plants, and motor vehicles. USCG activities are operated in accordance with all federal and state laws and local ordinances. Deviation from compliance with federal and state laws and local ordinances may temporarily occur in a usual situation, such as a breach in port security.

3.7 Hazardous Materials and Waste Management

3.7.1 Definition of the Resource

The USCG must comply with federal statutes and regulations and with standard operating procedures as they apply to hazardous materials and hazardous waste with respect to the mission. USCG vessels comply with these statutes, regulations, and standard operating procedures as appropriate for each particular asset type and class. Some examples of hazardous materials associated with USCG cutters and boats include: cleaning agents, fuels oils, lubricants, and solvents (USCG 2002b).

As defined by CERCLA and SARA, a hazardous material is a substance, pollutant, or contaminant that, due to its quantity, concentration, or physical and chemical characteristics poses a potential hazard to human health and safety or to the environment. Typical hazardous materials at ISC Seattle include cleaning agents, fuels, oils, lubricants, and solvents (Scala, personnel communication 2002).

The Resource Conservation and Recovery Act (RCRA) defines a hazardous waste as a solid waste (or combination of wastes), which, due to its quantity, concentration, or physical, chemical, or infectious characteristics, can cause or significantly contribute to an increase in mortality. RCRA further defines hazardous waste as one that can cause an increase in serious, irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, disposed of, or otherwise managed. A solid waste is a hazardous waste if it is

not excluded from regulation as a hazardous waste or if it exhibits any ignitable, corrosive, reactive, or toxic characteristic (USCG 2002b). Typical hazardous wastes at ISC Seattle include oily rags, 'bad' gas, used cleaning solvents, used oils and lubricants (Scala, personnel communication 2002).

The USCG Hazardous Waste Management Manual (COMDTINST M 16478.1B), internally known as the "Red Book," is a compilation of standard operating procedures for employees handling hazardous materials and waste, asbestos, polychlorinated biphenyls (PCBs), fuel tanks, lead, and biohazardous waste (USCG 2002b).

3.7.2 Affected Environment

ISC Seattle is in compliance with all applicable federal and state regulatory requirements for hazardous materials and waste management. As a large quantity generator, ISC Seattle can store waste for no more than 90 days. They operate under an EPA permit as a hazardous waste generator. Waste is disposed of via the Defense Reutilization Marketing Office (DRMO) (Scala, personnel communication 2002).

A Hazardous Waste Minimization (HAZMIN) Center is currently under construction and will be ready for operation in Fall 2002. This is an upgrade of the existing storage units. The Center will control the hazardous materials purchased by all units on the base. Units will develop authorized use lists (AULs) and the HAZMIN Center will be stocked to support those AULs. Under this approach, the Center will issue only a 7-14 day supply and will collect the empty containers after use. This procedure will facilitate the tracking required for the Environmental Pollution Control and Reauthorization Act (EPCRA). It will also help in hazardous waste reduction and pollution prevention efforts. The full plan will go into effect in Fall 2002 (Scala, personnel communication 2002).

3.8 Socioeconomics

3.8.1 Definition of the Resource

NEPA requires an analysis of socioeconomic issues, if socioeconomic effects are interrelated with environmental effects. Socioeconomics are defined as the basic attributes and resources associated with the human environment, particularly population and economic activity. Regional birth and death rates and immigration and emigration affect population levels. Economic activity typically encompasses employment, personal income, and industrial or commercial growth. Changes in these two fundamental socioeconomic indicators may be accompanied by changes in other components such as housing availability and the provision of public services. Socioeconomic data at county, state, and national levels permits characterization of baseline conditions in the context of regional, state, and national trends.

Regional Economic Activity

Data in three areas provide key insights into socioeconomic conditions that might be affected by a proposed action. Data on employment may identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on personal income in a region can be used to compare the "before" and "after" effects of any jobs created or lost because of a proposed action. Data on industrial or commercial growth or growth in other sectors provides baseline and trend line information about the economic health of a region.

Facility Expenditures in Regional Economy

In appropriate cases, data on an installation's expenditures in the regional economy help to identify the relative importance of an installation in terms of its purchasing power and jobs base.

Demographics

Demographics identify the population levels and changes to population levels of a region. Demographics data may also be obtained to identify, as appropriate to evaluation of a proposed action, its characteristics in terms of race, ethnicity, poverty status, educational attainment level, and other broad indicators.

Quality of Life

Quality of life data identify both necessities and amenities a population may have at its disposal. Quality of life typically pertains to availability of housing, type of housing (homeowner or rental), and costs of housing. Data may also be obtained to indicate the number of public and private schools, including trade schools and institutions of higher learning. Information may also be provided regarding the availability and proximity to population centers of shopping and community services. Finally, data may indicate the availability and type of recreational opportunities available to a community to indicate a region's quality of life.

Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898)

This EO requires that federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. The essential purpose of the EO is to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal,

and commercial operations or the execution of federal, state, tribal, and local programs and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of where a proposed action would occur. Such information aids in evaluating whether a proposed action would render vulnerable any of the groups targeted for protection in the EO.

Protection of Children from Environmental Health Risks and Safety Risks (EO 13045)

This EO requires federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. The EO further requires federal agencies to ensure that their policies, programs, activities, and standards address these disproportionate risks. The order defines environmental health and safety risks as "risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink and use for recreation, the soil we live on, and the products we use or are exposed to)." Such information aids in evaluating whether a proposed action would render vulnerable children targeted for protection in the EO.

3.8.2 Affected Environment

The USCG maintains a relatively large presence in Seattle. The 13th USCG District and accompanying staff have been located in Seattle for almost 90 years. The district staff consists of 1,256 active duty personnel, 442 reserve personnel, and 81 civilian personnel. In addition to the district, Seattle is also home to Group Seattle, Station Seattle, Maritime Safety Office Puget Sound, Vessel Traffic Service Puget Sound, and Aids to Navigation Team Puget Sound. The MSST would be co-located with Group Seattle and would consist of 73 active duty personnel and 33 reserve personnel. The 73 active duty assignments would comprise mostly reassigned or new personnel although some personnel currently stationed in Seattle may be reassigned.

To comply with EO 12898, ethnicity and poverty status in the study area have been examined and compared to state and national statistics to determine if the Proposed Action could disproportionately affect minority or low-income groups. The Census Bureau bases the poverty status of families and individuals on threshold variables, including income, family size, number of family members under 18 and over 65 years of age, and amount spent on food. The U.S. poverty threshold is $11,821 for a family of three, and 13.12 percent of the U.S. population were below the poverty level in 1990. Therefore, based on the 1990 U.S. Bureau of Census data (see Table 3-8), residents in eight of the ten counties in the ROI have a lower poverty level than the national poverty level.

Table 3-8. Race and Poverty Characteristics for Counties in the Vicinity of the Port of Seattle

	Total Population	Percent White	Percent Black	Percent American Indian, Eskimo, or Aleut	Percent Asian or Pacific Islander	Percent Other	Percent reporting two or more races	Percent Living in Poverty
United States	**281,421,906**	**75.1**	**12.3**	**0.9**	**3.7**	**5.5**	**2.4**	**13.1**
Washington	**5,894,121**	**81.8**	**3.2**	**1.6**	**5.9**	**3.9**	**3.6**	**10.9**
Clallam County	64,525	89.1	0.8	5.1	1.3	1.2	2.4	12.5
Jefferson County	25,953	92.2	0.4	2.3	1.3	0.8	3.0	13.5
King County	1,737,034	75.7	5.4	0.9	11.3	2.6	4.1	8.0
Kitsap County	231,969	84.3	2.9	1.6	5.2	1.4	4.6	9.4
Mason County	49,405	88.5	1.2	3.7	1.5	2.1	3.0	13.2
Pierce County	700,820	78.4	7.0	1.4	5.9	2.2	5.1	11.4
Skajit County	102,979	86.5	0.4	1.9	1.7	7.2	2.4	11.5
Snohomish County	606,024	85.6	1.7	1.4	6.1	1.9	3.4	6.6
Thurston County	207,355	85.7	2.4	1.5	4.9	1.7	3.9	10.1
Whatcom County	166,814	88.4	0.7	2.8	2.9	2.5	2.7	12.3

Sources: U.S. Bureau of Census 2000
U.S. Bureau of Census 1990
Note: Poverty data reflects U.S. Bureau of Census 1990 data

Development is rapid within the Seattle metropolitan area and the Puget Sound coastal area. The population is expected to reach 2 million people by 2020 (PSWQAT 2002). The City of Seattle and the surrounding counties have delineated boundaries to contain development and maintain open "growth boundaries." Housing prices have escalated from approximately $256,000 (1996) to $367,000 (2001) (Times 2002). Therefore, the availability and cost of housing has increased home prices beyond the majority of personnel's means. A large number of personnel live 'across the water' (Bremerton and Silverton) and use the ferry system to commute between home and work. This commute takes approximately one hour (Vogel, personnel communication 2002).

Elliot Bay and the Duwamish Waterway are within the U&A fishing area of the Muckleshoot and Suquamish Indian Tribes. For the purposes of EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations), these tribes are considered minority populations. Treaty fishing activities in the vicinity of the ISC Seattle include salmon and steelhead net fisheries, and usually take place intermittently from mid-July until the end of November. The tribes use both gill net and skiff fishing. Nets are set adjacent to ISC Seattle's Pier 36 and just downstream from the ISC facility. Tribes have exclusive rights to commercial net fishing in Puget Sound and have full authority to make and enforce their own fisheries management plans.

3.9 Soils and Land Use

3.9.1 Definition of the Resource

Land use generally refers to human modification of land, often for residential, economic, or recreational purposes. It also refers to use of land for preservation or protection of natural resources, such as wildlife habitat. Land uses frequently are regulated by management plans, policies, ordinances, and regulations that determine the types of uses that are allowable or that protect specially designated or environmentally sensitive uses.

An area's geological resources typically consist of surface and subsurface materials and their inherent properties. Principal factors influencing the ability of geological resources to support structural development are seismic properties (i.e., potential for subsurface shifting, faulting, or crystal disturbance), soil stability, and topography. Topography is defined as the relative position and elevations of the natural and/or man-made features of an area that describe the configuration of its surface. An area's topography is influenced by many factors, including human activity, seismic activity of the underlying geological material, climatic conditions, and erosion. Information about an area's topography typically encompasses surface elevations, slope, physiographic features (i.e., mountains, ravines, or depressions), and their influence on human activities.

The major effects of earthquakes are surface rupture, ground shaking and other forms of ground failure including liquefaction and subsidence. These effects of these geohazards are described below.

3.9.2 Affected Environment

The Seattle area was covered by the Vashon Lobe of the Cordilleran Ice Sheet in the Late Pleistocene, and this glacier created the topography and surficial deposits of today's landscape. About 80 percent of the area still has Vashon till at the surface. The till was smoothed by subglacial action into north-south-trending ridges and swales that have lengths of five to ten kilometers (km), widths of 0.3- 0.7 km, and sideslopes up to five to ten degrees. These constructional ridges dominate the topography of Seattle, and postglacial modification has been relatively minor except in certain restricted areas.

The largest area of postglacial deposits is the floodplain of the Duwamish River in the south part of the study area. This two km-wide floodplain represents a thick postglacial fill of alluvium that grades into a large submerged delta in Elliot Bay. Other postglacial deposits include small areas of alluvium along minor stream courses and marsh deposits in closed depressions on the till surface.

Sediment beneath the pier and within the cutter berthing area contains levels of contamination. Contaminants of concern include metals, Low molecular weight Polynuclear Aromatic Hydrocarbon (LPAH), High molecular weight Polynuclear Aromatic Hydrocarbon (HPAH), dibenzofuran and phenols. Puget Sound Dredge Disposal Analysis screening levels, and maximum levels are exceeded for several constituents. Sediments, which exceed the screening levels, may exhibit occasional adverse biological effects to benthic organisms (USCG 2002h).

During the Nasqually earthquake in 2001, the Pier 36-Berth Alpha sustained moderate damage. Pier 36, originally built in the 1920s, is a timber structure constructed using creosote-treated piles. Marine borer infestation has damaged every pile in the structure, requiring extensive repairs every few years. It is in generally poor condition. This pier was partially constructed on old fill. During the earthquake, it is suspected that some liquidization occurred in this fill area, which is responsible for the resulting damage of the building on top of the pier. This building is currently undergoing some earthquake strengthening. Other buildings sustained only minor damage (USCG 2002d, Vogel, personnel communication 2002).

Existing depths in the slip basin at ISC Seattle vary from –30 to –39 feet below mean lower low water. Slope elevations vary from +14 ft at the bulkhead to –30 ft at the pier face. Maintenance dredging is rarely required as ISC Seattle (USCG 2002h).

The existing land use at ISC Seattle is consistent with the USCG Master Plan. Although not applicable to Federal property, the Seattle Municipal Code designates the ISC Seattle vicinity as an "Urban Industrial"

environment. Land use along the entire shoreline is generally industrial with a number of marine terminals (USCG 2002h).

In recognition of the increasing pressures of over-development upon the nation's coastal resources, Congress enacted the Coastal Zone Management Act (CZMA) in 1972. The CZMA encourages states to preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. A unique feature of the CZMA is that participation by states is voluntary. To encourage states to participate, the act makes federal financial assistance available to any coastal state or territory, including those on the Great Lakes, that is willing to develop and implement a comprehensive coastal management program. Puget Sound falls within the definition of a Coastal Management Zone. The State of Washington has chosen to participate with CZMA. As such, the State passed an equivalent law, the Shoreline Management Act (SMA). The Act specifically states federal and tribal owned lands are not included (Shoreline Management Act 1972). Therefore, the build-out of Building 7 is not affected by the Act. The other shores within the ROI are subject to the SMA. However, due to the simultaneous repeal of the original 1972 guidelines and the invalidation of the recently adopted new guidelines, Washington State currently has no shoreline management guidelines in effect (WSOE 2002).

3.10 Public Safety

3.10.1 Definition of the Resource

A safe environment is one in which there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Safety and accident hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself together with the exposed (and possibly susceptible) population. The degree of exposure depends primarily on the proximity of the hazard to the population. Activities that can be hazardous include transportation, maintenance and repair activities, and the creation of highly noisy environs. The proper operation, maintenance, and repair of vehicles and equipment carry important safety implications. Any facility or human-use area with potential explosive or other rapid oxidation process creates unsafe environments for nearby populations. Extremely noisy environments can also mask verbal or mechanical warning signals such as sirens, bells, or horns.

3.10.2 Affected Environment

Public safety is one of the USCG's primary missions, as the USCG is the prominent overseer of maritime safety in all U.S. waters, including the high seas. The U.S. maritime transportation system is diverse. Geography, environmental conditions and the amount and types of vessel traffic are all aspects of the U.S.

maritime system. Ships, boats, and barges entering and leaving the Port of Seattle operate under the USCG's Vehicle Transportation System (VTS). This system establishes shipping lanes into and out of Puget Sound and the Port, establishes times for embarkations and debarkations, and in concert with the other USCG units, assists in maintaining port security (USCG 2002b).

U.S. ports must provide safe and efficient rapid turnaround capabilities to accommodate expanding trade and the increasing size and speed of oceangoing ships, many which are foreign. U.S. ports also handle a large volume of coastal and inland traffic. Major members of the U.S. maritime transportation system include federal agencies, commercial groups, state and local groups, and public and community groups (USCG 2002b). Since the events of September 11, 2001, the safety of the country's ports and its maritime system has received increased scrutiny and concern. It is due to those concerns that the Proposed Action is being considered.

3.11 Infrastructure

3.11.1 Definition of the Resource

Infrastructure consists of the systems and physical structures that enable a population in a specified area to function. Infrastructure is wholly human-made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as "urban" or developed. The availability of infrastructure and its capacity to support growth are generally regarded as essential to the economic growth of an area. Consideration of infrastructure is applicable to a proposed action or alternative where there is any issue with respect for local capacities (e.g., utilities, transportation networks) to provide the requisite support. There is no clear, national consensus as to what constitutes infrastructure.

3.11.2 Affected Environment

The ISC Seattle does not maintain its own fire department or medical facilities. They have agreements with the City of Seattle for these services. Electricity is purchased from Seattle City Light and gas is purchased from the Puget Sound Company. Sewage is handled by the County's treatment facility at West Point. Supplies are more than adequate to meet the needs of ISC Seattle (Vogel, personnel communication 2002).

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4. Environmental Consequences

4.1 Introduction

This chapter will present the potential environmental impacts of the Proposed Action and the No Action Alternatives. U.S. Coast Guard (USCG) personnel and cutters currently perform security duties in and around the Puget Sound and Port of Seattle areas, the Proposed Action is an addition of personnel and equipment to the current number of assigned personnel and inventory.

The Proposed Action is the stand-up and operation of a Maritime Safety and Security Team (MSST) at the Integrated Support Group (ISC), Seattle. The MSST will consist of six Response Boats-Small (RBS) and approximately 73 active duty personnel and approximately 33 reservists.

Under the No Action Alternative, the USCG would continue to conduct safety and security activities at the current level. This section of the Environmental Assessment (EA) assesses potential environmental consequences associated with the Proposed Action. Potential impacts are addressed in the context of the scope of the Proposed Action as described in Section 2.0 and in consideration of the potentially affected environment as characterized in Section 3.0.

4.2 Biological Resources

4.2.1 Significance Criteria

This section evaluates the potential impacts to the biological resources under the Proposed Action and the No Action Alternative. The significance of impact to biological resources is based on (1) the importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource; (2) the proportion of the resource that would be affected relative to its occurrence in the region; (3) the sensitivity of the resource to proposed activities; and (4) the duration of ecological ramifications. The impacts to biological resources are significant if species or habitats of high concern are adversely affected over relatively large areas. Impacts are also considered significant if disturbances cause reductions in population size or distribution of a species of high concern.

Protected and Sensitive Habitats

Although a number of wildlife refuges, parks and a marine sanctuary are located in the general area; the only protected area within the Region of Influence (ROI) is the San Juan Islands National Wildlife Refuge. Laws relating to protected and sensitive habitats include the Marine Protection, Research, and Sanctuaries Act, the Magnuson-Stevens Conservation and Management Act, the Oil Pollution Act, and

the Endangered Species Act (ESA). Under either alternative, the USCG would continue to enforce these living marine resource protection laws.

ISC Seattle's Pier 36 is located in and adjacent to Elliot Bay. The mission area of the MSST covers all of Puget Sound. Local areas within Puget Sound are recognized as the usual and accustomed (U&A) fishing places of around 20 Indian Tribes. Informal consultation was held via telephone on May 20, 2002 between representatives of the USCG and officials of the Muckleshoot Tribe to assure them that the MSST Puget Sound does not have the authority to establish limitations on the use of U&A tribal fishing places. In addition, points of contact (Captain of the Port and a USCG District Thirteen representative) will continue to coordinate with the tribes to ensure that less than substantial direct effects will result from the operations of the MSST. No disproportionately high and adverse human health or environmental or economic effects on minority and low-income populations are anticipated in connection with the establishment of MSST Puget Sound.

Impacts to Protected and Sensitive Habitats or the Salmon Management and Catch Reporting Areas would be significant if MSST activities resulted in any of the following:

- Temporary or permanent loss of any sensitive, protected or Reporting Area habitat
- Direct loss or damage of any sensitive resource within a protected or sensitive habitat
- Excessive noise or presence from normal USCG activities that lessens the habitat value

Marine Mammals

The USCG enforces all U.S. laws on all U.S. waters, including laws protecting marine mammals and sensitive species. The USCG enforces the Endangered Species Act, the Marine Mammal Protection Act, the National Marine Sanctuaries Act, and a number of maritime Executive Orders, federal and international laws as applicable. The USCG's Commandant Instructions (COMDTINSTs) include a number of policies, directions, and procedures that include specific rules to ensure avoidance with marine mammals and avoid impacts whenever possible. The USCG's Ocean Steward and Ocean Guardian programs also support these goals. The enforcement of these laws and the continued implementation of Ocean Steward and Ocean Guardian would occur under either alternative.

Impacts to marine mammals would be significant if MSST activities resulted in any of the following:

- Long-term or permanent loss of any habitat
- Direct loss (take) of a substantial number of a specific species which would affect the species ability to survive

- Harassment, either Level A (as defined in the Marine Mammal Protection Act [MMPA]) defined as pursuit, torment, or annoyance that has the potential to injure, or Level B, defined as causing disruption of behavioral patterns
- Permanent loss of breeding areas and habitat
- Substantial interference with movement of any resident species

Several endangered species occur within the ROI. They include the fin whale, humpback whale and the Pacific Right Whale. The Southern Sea Otter is the only threatened species known to occur in this area.

Port Angeles, Washington, located within the ROI, is adjacent to possible habitat for protected marine mammal species; although it is unusual for many of these species to occur at this location.

Other mammals that are known to frequent to Washington coast are gray whales, orca whales, harbor porpoises and seals. It is not unusual for a few gray whales and orca whales to pass through Puget Sound and they are occasionally seen in Elliot Bay each spring on their way to the feeding waters off the coast of Alaska. They usually enter the shallow waters in search of ghost shrimp before continuing their migration northward.

Fish

Fisheries may be impacted by a number of factors. The most important factors within the ROI are disturbance from direct contact between USCG vessels, enforcement of applicable fishing laws and impacts to fish habitat. Additional impacts may result from accidental pollution emissions. The USCG enforces a number of laws. In addition, USCG has developed their own initiatives to protect fisheries and their habitat.

ISC Seattle is located at the mouth of the east waterway of the Duwamish River where it enters Elliot Bay. Three primary species of salmonids are found in the Duwamish River. It is likely that the Duwamish River contains viable populations of wild Chinook salmon; therefore, it is possible that juvenile Chinook salmon utilize the ISC Seattle berthing slip while migrating to the ocean. Puget Sound bull trout (listed as threatened) also migrate through the area. Puget Sound is identified as an Essential Fish Habitat (EFH). However, upon reviewing the EFH Assessment Template, it does not appear that the operations of the MSST will significantly impact those fish regulated under the fisheries management plan (NOAA 2002).

Although all of Puget Sound has been designated critical habitat for the Puget Sound Chinook salmon, a recent agreement between NMFS and the National Association of Home Builders (NAHB) will remove that designation for at least the next two years while NMFS performs a review of economic impacts.

ISC Seattle's Pier 36 is located in and adjacent to Elliot Bay. The mission area of the MSST covers all of Puget Sound. Local areas within Puget Sound are recognized as the U&A fishing places of around 20 Indian Tribes. Informal consultation was held via telephone on May 20, 2002 between representatives of the USCG and officials of the Muckleshoot Tribe to assure them that the MSST Puget Sound does not have the authority to establish limitations on the use of U&A tribal fishing places. In addition, points of contact (Captain of the Port and a USCG District Thirteen representative) will continue to coordinate with the tribes to ensure that less than substantial direct effects will result from the operations of the MSST.

Impacts to fisheries would be significant if MSST activities resulted in any of the following:

- Overfishing resulting the in species ability to survive
- Permanent loss of breeding areas and habitat
- Substantial interference with movement of any resident species

Coastal and Other Birds

In enforcing the ESA, the USCG also protects endangered and threatened bird species on the water. The USCG must also comply with the ESA, the Migratory Bird Treaty Act and the Executive Order (EO) on Responsibilities of Federal Agencies to Protect Migratory Birds.

Thirteen threatened and endangered coastal birds can be found in the Pacific Coastal region. ISC Seattle is located within the range of the American Bald Eagle and the American Peregrine Falcon (both listed as threatened). Impacts to coastal and other birds would be significant if MSST activities resulted in any of the following:

- Harassment of nesting and foraging areas resulting in the species ability to survive
- Permanent loss of breeding areas and habitat
- Substantial interference with migration

4.2.2 Potential Impacts

Protected and Sensitive Habitats

Proposed Action. Although a number of wildlife refuges, parks and a marine sanctuary are located in the general area; the only protected area within the Region of Influence (ROI) is the San Juan Islands National Wildlife Refuge. Under the Proposed Action, the MSST would provide increased port security, which would mean better protection for sensitive marine areas. Based on the purpose of and projected

operations of the MSSTs, they would not normally patrol in or near the wildlife refuges, parks, or the marine sanctuary. An exception to these normal operations would be in the case of an unusual occurrence (i.e., pursuit). Under a normal operational scenario (two to four boats traveling at 10 to 12 knots), impacts might be considered minor adverse. The MSST will spend the majority of its operating time within the Puget Sound National Estuary. However, the boat engines will comply with U.S. Environmental Protection Agency (EPA) standards. Therefore, it is not expected that operations from these boats will result in more than minor adverse impacts.

ISC Seattle's Pier 36 is located in and adjacent to Elliot Bay. The mission area of the MSST covers all of Puget Sound. Local areas within Puget Sound are recognized as the usual and accustomed (U&A) fishing places of around 20 Indian Tribes. Informal consultation was held via telephone on May 20, 2002 between representatives of the USCG and officials of the Muckleshoot Tribe to assure them that the MSST Puget Sound does not have the authority to establish limitations on the use of U&A tribal fishing places. In addition, points of contact (Captain of the Port and a USCG District Thirteen representative) will continue to coordinate with the tribes to ensure that less than substantial direct effects will result from the operations of the MSST.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and the potential for significant adverse impacts to protected and sensitive habitats.

Marine Mammals

Proposed Action. The USCG's current COMDTINSTs, regulations and procedures to avoid marine mammals would continue under the Proposed Action. While the primary purpose of the MSST is to provide increased port security capability, the MSST unit will still abide by regulations and legislation designed to protect the marine environment. Although standing up the MSST will add six new boats capable of 40 knots to Elliot Bay and Puget Sound, the USCG vessels are only a small percentage of a much larger number of commercial and recreational vessels that enter this port on a daily basis. The actual increase of six 25-foot vessels is a small increase when compared to the currently existing traffic already using this port. Even though the RBSs are capable of going 40 knots, such high speeds will not be used on a continuous basis and will usually be reserved for emergency security operations that necessitate high speed. Normal transit speeds will be in the range of 10-15 knots. Additionally, these boats are designed to be highly maneuverable. This maneuverability is a necessity for carrying out their critical homeland security mission. The highly maneuverable nature of these vessels will assist them in avoiding

collisions with protected species. Also, all six RBSs will not be operating together all of the time. Moreover, for all MSST operations other than emergency operations, the USCG will continue to abide by its speed guidance published October 27, 1997 for vessels operating along the Pacific coast, "Coast Guard Vessel and Speed Approach Guidance" for whales. This guidance states:

> *"Reduction in vessel speed should be considered when a whale is sighted, known to be in the immediate area, or known to have been sighted within five nautical miles. Speeds as appropriate, yet navigationally prudent, to avoid collision with a whale, and if necessary, reduce speed to a minimum at which the vessel can be kept on course or come to all stop.*
>
> *Do not approach whales head-on, nor approach within 100 yards. Approach distances may vary if the Coast Guard vessel is assisting in the rescue of an endangered whale or performing duties to enforce the Endangered Species Act or Marine Mammal Protection Act."*

Additionally, the USCG would continue to abide by the policies contained in the Ocean Steward (see Appendix F for the full text). Because of the current guidance in place to encourage avoidance of negative contact by USCG vessels with marine mammals, the small number and size of the vessels, the boats' high level of maneuverability, and their low level of speed during normal operations, we believe the addition of the MSST vessels will not create the potential for significant impacts to these protected species. The Homeland security mission carried out by the MSST can also be important in protecting these species in that it can help prevent terrorist activities from damaging their marine environment through terrorist attacks that could result in significant damage to or contamination of their habitat. An exception to these normal operations would be in the case of an unusual occurrence (i.e., pursuit).

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and the potential for significant adverse impacts to marine mammals.

Fish

Proposed Action. The MSSTs primary mission will not be to enforce fisheries protection laws although they will be operating in the same area as the Muckleshoot and Squamish Tribes. The USCG MSSTs will work with the Captain of the Port to ensure that less than substantial direct effects will result from MSST operations.

Impacts to fish from vessel operations should be minor, if any, even during emergency operations. Analysis in the Atlantic Protected Living Marine Resources Initiative Environmental Impact Statement (USCG 1996) indicated that vessel operations, noise and physical presence of a vessel posed no significant impact to fish.

Likewise, impacts to migrating salmonids should be of minor significance.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and the potential for significant adverse impacts to fish habitat and Muckleshoot and Squamish fishing rights.

Coastal and Other Birds

Proposed Action. ISC Seattle does not provide suitable habitat for threatened and endangered species nor migratory birds. The MSSTs' normal operations will not be within or adjacent to nesting and foraging habitat for threatened and endangered species, nor migratory birds.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and the potential for significant adverse impacts to coastal and migratory birds.

4.3 Water Resources

4.3.1 Significance Criteria

Significance criteria for water resources impacts are based on water availability, quality, and use; existence of floodplains; and associated regulations. A potential impact on water resources would be significant if it were to: reduce water availability to existing users or interfere with the supply; create or contribute to overdraft of groundwater basins or exceed safe annual yield of water supply sources; adversely affect water quality or endanger public health by creating or worsening adverse health hazard conditions; threaten or damage unique hydrologic characteristics; or violate established laws or regulations that have been adopted to protect or manage water resources of an area. The impact of flood hazards on a proposed action is significant if such an action is proposed in an area with a high probability of flooding. The ROI for water resources includes Puget Sound and Elliot Bay.

4.3.2 Potential Impacts

Surface Water

Proposed Action. The ISC at the Port of Seattle is located at the mouth of the East waterway of the Duwamish River and Elliot Bay within Puget Sound. The Washington Department of Ecology rates the surface water quality of Elliot Bay as Class A (excellent).

Four stroke engines that meet EPA and California Air Resource Board 2006 emissions standards would power the response boats. These standards call for a 75 percent reduction of non-road source emissions (which include watercraft) from calendar year 2001 levels. This would result in a minor reduction (and therefore, a positive minor impact) in potential exhaust discharge into Puget Sound.

The response boats would be refueled at a certified marina refueling station at the Port of Seattle or at a local gas station. The refueling station is equipped with control devices to minimize the accidental release of petroleum products into the water. All of these facilities must also meet federal and state spill regulations. However, with the possibility that accidents may happen, minor adverse impact to water quality might occur.

The number of personnel expected as a result of the Proposed Action is 73 active-duty and 33 reservists. The reservists are located in and around Seattle. The number of additional personnel is extremely small when compared to the population of Seattle and the surrounding counties. The additional MSST personnel who will occupy the Building 7 will not require significant amounts of water. There would be only minor adverse, if any, impacts to water supplies in the area.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and the potential for significant adverse impacts to marine mammals.

Groundwater

The stand-up and operations of the MSSTs would not require construction or demolition activities. There would be no increase in impervious surface area and therefore no impact to groundwater recharge capacity. Therefore, there would be no adverse impacts.

Floodplains and Wetlands

The ISC Seattle is not located within any floodplains, nor is there any wetlands on or adjacent to the facility. According to the Puget Sound Water Quality Plan, 70 percent of the tidally influenced wetlands in Puget Sound have been lost in the past century. In addition, 33 percent of the marine shorelines have been modified (PSWQAT 2002). Under normal operating conditions, the RBSs will cruise at 10 to 12 knots, thus creating a comparatively small wake. Therefore, there would be no impacts as a result of the Proposed Action.

4.4 Cultural and Historical Resources

4.4.1 Significance Criteria

Cultural resources are subject to review under both federal and state laws and regulations. Section 106 of the National Historic Preservation Act (NHPA) empowers the Advisory Council on Historic Preservation to comment on federally initiated, licensed, or permitted projects affecting cultural sites listed or eligible for inclusion on the National Register of Historic Places (NRHP). Analysis of potential impacts on cultural resources considers both direct and indirect impacts

Direct impacts are assessed by identifying the types and locations of proposed activities and determining the exact locations of cultural resources that could be affected by such activities. Indirect impacts primarily result from the effects of project-induced housing population increases and the resultant need to develop new housing areas, utility services, and other support functions necessary to accommodate population growth. These activities and the subsequent use of the facilities may impact cultural resources.

4.4.2 Potential Impacts

Proposed Action. Since the Proposed Action includes the modification of Building 7, the Proposed Action is subject to Section 106 of the NHPA, as amended in 1992 (16 USC 470 et seq.).

NHPA regulations provide examples of adverse effects resulting from proposed actions:

- Physical damage to or destruction or alteration of all or part of the property
- Isolation of the property or alteration of the character of the property's setting when that character contributes to the property's qualifications for the NRHP
- Introduction of visual, audible, or atmospheric elements that are out of character with the property, or changes that alter its setting
- Neglect of a property resulting in its deterioration or destruction
- Transfer, lease, or sale of a property without adequate providing to protect the property's historic integrity

The likelihood of significant prehistoric archaeological resource is very low. Any artifacts would have been imported with the fill during the 1910s and therefore, would be out of their original context. It is likely that past intensive building development, installation of underground utilities and shoreline modification have adversely affected most of the historic archaeological potential of the site. Therefore, the potential for archaeological resources is assessed as low. The modification of Building 7 will not result in subsurface disturbance. Therefore, no adverse impact to architectural resources is anticipated.

The USCG is currently consulting with the Washington State Historic Preservation Officer (SHPO) on the determination that Building 7 is not eligible for the National Register. If during that consultation, the SHPO presents evidence that would lead to a change in eligibility determination, USCG will continue the Section 106 process as stated in 36 Code of Federal Regulations (CFR) Part 800 and consult with the SHPO on the effects of the actions on Building 7. In the unlikely event that the building is determined eligible, and further consultation results in a finding of adverse effect, the USCG will attempt to mitigate any such effects below the level of significance through the Section 106 consultation process and proceed to document any necessary mitigation in an Memorandum of Agreement (MOA) with the SHPO.

There are a number of other cultural and historic resources within the ROI. These are identified in Section 3.4. Most of these resources are located on land and protected from wave action created by the large ships by sea walls. The two ships (San Mateo and the hospital ship, Idaho) are tied to docks. It is assumed that adequate protective measures have been taken for these two resources. Therefore, the operations of the MSST should not adversely impact any cultural or historical resource within the ROI.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. Impacts of selecting this alternative would be considered adverse due to the potential of terrorist attacks on U.S. ports. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and the potential for significant adverse impacts to cultural and historic resources adjacent to and on Puget Sound.

4.5 Air Quality and Climate

4.5.1 Significance Criteria

The potential impacts to local and regional air quality conditions near a proposed federal action are determined based upon the increases in regulated pollutant emissions relative to existing conditions and ambient air quality. Impacts to air quality in National Ambient Air Quality Standards (NAAQS)

"attainment" areas are considered significant if the net changes project-related emissions result in one of the following situations:

- Violation of any national or state ambient air quality standards
- Exposure of sensitive receptors to substantially increased pollutant concentrations
- An increase of 10 percent or more in an affected Air Quality Control Region (AQCR) emissions inventory

Impacts to air quality in NAAQS "non-attainment" areas are considered significant if the net changes in project-related emissions result in one of the following situations:

- Violating any national or state ambient air quality standards
- Increasing the frequency or severity of a violation of any ambient air quality standard
- Exceeding any significance criteria established in a State Implementation Plan (SIP)
- Delaying the attainment of any standard or other milestone contained in the SIP

With respect to the General Conformity Rule, impacts to air quality would be considered significant if the Proposed Action would result in an increase of a non-attainment or maintenance area's emission inventory by ten percent or more for one or more non-attainment pollutants, or if such emissions exceed *de minimis* threshold levels established in 40 CFR 93.153(b) for individual non-attainment pollutants or for pollutants for which the area has been designated as a non-attainment or maintenance area. The Proposed Action would occur in an attainment area, therefore the General Conformity Rule does not apply.

Federal Prevention of Significant Deterioration (PSD) regulations also define air pollutant emissions to be "significant" if: 1) a proposed project is within 10 kilometers of any Class I area; and 2) regulated pollutant emissions would cause an increase in the 24-hour average concentration of 1 $\mu g/m^3$ or more of any regulated pollutant in the Class I area (40 CFR 52.21(b)(23)(iii)). PSD regulations also define ambient air increments – limiting the allowable increases to any area's baseline air contaminant concentrations, based on the area's designation as Class I, II, or III (40 CFR 52.21(c)).

Local and regional pollutant impacts of direct and indirect emissions from stationary emission sources from the Proposed Action are addressed through federal and state permitting program requirements under the NSR and PSD regulations (40 CFR Parts 51 and 52).

4.5.2 Potential Impacts

The potential sources of increased criteria pollutant emissions under the Proposed Action would be from 1) construction activities; and 2) watercraft operations, 3) fuel storage and handling emissions, 4) maintenance and support activities, and 5) personnel travel.

Construction Activities.

Proposed Action. The USCG is currently renovating Building 7, a large concrete warehouse. Renovations consist mostly of interior remodeling to efficiently utilize the existing space. No earth moving equipment or non-road mobile units would be required for this operation. Short-term minor adverse impacts would result from the construction of the MSST facility within Building 7.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. No additional concerns over current minor adverse (if any) impacts are expected.

Watercraft Operations.

Proposed Action. The vessels and engines to be used for the MSSTs RBSs must meet specific requirements, including, the capability of sustaining speeds of 40+ knots in calm seas. The proposed engines to be used would be similar to the Yamaha or Honda 200 or 225 horsepower engines. These four-stroke engines would meet the speed requirements of the USCG and would fulfill Federal EPA 2006 emission requirements and the stricter California Air Resources Board (CARB) guidelines.

Calculations of air pollutant emissions from the proposed MSST operations were based on two boats operating twenty-four hours a day, seven days a week at approximately ten to twelve knots. Since exact emissions, operations, and locations of these operations are unknown at this time, it is assumed that moderate adverse impacts will occur as a result of the Proposed Action.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. No additional concerns over current minor adverse (if any) impacts are expected.

Maintenance and Support Activities

Proposed Action. Under the Proposed Action, only minor maintenance will be performed in Building 7. In addition, this building is not equipped to handle emissions that would result from engine run-ups. Since the maintenance schedule is not known, but taking into consideration that all maintenance at the

ISC will be minor, it is anticipated that there would be minor adverse impacts on air quality in the region. No additional support facilities (beyond the build-out of office space in Building 7) will be required to support the MSST.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. No additional concerns over current minor adverse (if any) impacts are expected.

Personnel Travel

Proposed Action. Parking at ISC Seattle is extremely limited; the facility only has 774 parking spaces. Of the 12.5 percent allotted for each tenant command, some spaces are reserved for carpools and the remaining spaces are first come first served. Based on their allotment, the MSST will be provided nine reserved spaces. Overflow parking is along Alaskan Way and other city streets. A large number of ISC Seattle personnel live 'across the water' (in the towns of Bremerton and Silverdale) and use commercial ferries to and from the facility. The number of additional personnel is comparatively small and would result in minor adverse impacts to air quality.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. No additional concerns over current minor adverse (if any) impacts are expected.

Fuel Storage and Handling Emissions

No new fuel storage or dispensing facilities will be required under the Proposed Action. Response boats will be refueled at existing marina facilities or gas stations. All dispensing facilities would have regulated vapor controls to reduce evaporative emissions. It is anticipated that there would be minor adverse impacts on air quality in the region.

4.6 Noise

4.6.1 Significance Criteria

Noise produced by water vessels and supporting facilities while homeported or in transit can combine with other noise sources to affect nearby communities and natural resources. This section addresses the noise impacts from the Proposed Action and the No Action Alternative. Examples of noise impacts from MSST operations include noise from vessels, construction equipment (temporary), and traffic. Noise impacts were only considered within the ROI. This section also discusses general noise impacts to marine mammals. The USCG has established guidelines and develops cooperative agreements to mitigate

impacts on neighboring communities. Federal and state laws and local ordinances establish standards and limitations for noise output from ports, airfields, heliports, helipads, power generating plants, and motor vehicles.

Currently, the USCG units stationed in the Port of Seattle are adjacent to compatible areas, which are zoned industrial or commercial. USCG activities are operated in accordance with all federal and state laws and local ordinances.

Noise impact criteria normally are based partly on land use compatibility guidelines and partly on factors related to duration and magnitude of the noise level itself, including the time of day and the conduct of operations. Specific boats and engines have not been identified. Therefore, because noise levels for these engines cannot be determined, this noise analysis and comparison is limited to the operational criteria requirements. Four types of engines have been identified that would meet the operational requirements: Honda 200 or 225 (3471 cubic inch/displacement) or Yamaha 200 or 225 (3352 cubic inch/displacement).

4.6.2 Potential Impacts

Proposed Action. The Proposed Action is to stand up and operate six RBSs. Specific operations are unknown. The expectation is to deploy two teams with three boats each. It is anticipated that the MSSTs will operate 24 hours a day, seven days per week and that one boat per MSST will be on station performing basic maintenance. Thus, there will only be four boats operating at any given period.

Because noise values for the four types of engines and unidentified boats cannot be determined and the Port of Seattle and Puget Sound is such a large geographic area, it is not possible to provide numerical noise level estimates that would be representative of the noise impacts at this magnitude. Qualitative comparisons to existing conditions have been provided for evaluating relative vessel noise generation by the Proposed Action. Data on airborne noise generation by marine vessels generally is not available. Most vessel operations occur well away from coastal areas. Hence, airborne noise from marine vessel operations is rarely an issue of concern because the majority of the population in the vicinity of the waterways is familiar with the sound of a passing boat. Boat sounds have become a part of the existing noise environment.

In regard to noise impacts by vessels to marine mammals, there is no scientific consensus regarding absolute thresholds for significance. However, this section applies current scientific knowledge to the assessment of impacts from ocean going vessels on marine mammals. As previously discussed in section 3.9, underwater dB measurements are not equivalent to dB measurements of airborne sounds. The

reference pressure used for underwater noise measurement (1μPa) is much lower than that used for airborne sound measurements (20μPa).

The impact that a human-made sound can have on sea life depends on its loudness and on the specific acoustic frequency pattern at the location where the marine organisms detect the sound, and the distance from the noise source. High frequency components of the noise decrease more rapidly with distance than do low frequency components.

Under the Proposed Action, six new boats would be added to ISC Seattle and operate in the vicinity of the Port and Puget Sound. The amount of patrol time would be 24 hours a day seven days a week. While noise data for USCG vessels is not available, speeds in port areas would expected to continue to be generally low except during an unusual event (i.e., pursuit). Based on limited knowledge, it is anticipated that noise impacts would be moderately minor adverse within the Port. In the Puget Sound areas where on-shore development is relatively sparse, noise impacts may be moderately adverse.

Although the Proposed Action would produce an increase in the overall level of boat operations, the size of the vessels proposed are smaller than existing vessels operating in the vicinity of the Port of Seattle and Puget Sound. RBSs noises are most likely well below sound intensities associates with severe disturbance or injury to marine mammals at normal operating procedures. In addition, the number of marine mammals that frequent the ROI is low. Since there is no scientific information concluding that the noise levels emitted by existing larger USCG vessels have direct significant adverse impacts on marine mammals, it is not anticipated that the noise generated by the RBSs will create greater than minor adverse impacts.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and impacts to the environment.

4.7 Hazardous Materials and Waste Management

4.7.1 Significance Criteria

The USCG must comply with federal statutes and regulations and standard operating procedures as they apply to hazardous materials and hazardous waste with respect to the MSST mission. USCG vessels comply with these statues, regulations, and standard operating procedures as appropriate for each particular asset type and class. Some examples of hazardous materials associated with USCG cutters and

boats include cleaning agents, fuels oils, lubricants, and solvents. Typical hazardous wastes at ISC Seattle include oily rags, 'bad' gas, used cleaning solvents, used oils and lubricants.

The USCG Hazardous Waste Management Manual (COMDTINST M 16478.1B), internally known as the "Red Book," is a compilation of standard operating procedures for employees handling hazardous materials and waste, asbestos, PCBs, fuel tanks, lead, and biohazardous waste.

Existing conditions at ISC Seattle for the handling of hazardous materials and waste management are in compliance with all applicable federal and state regulatory requirements. As a large quantity generator, ISC Seattle can store waste for no more than 90 days. They operate under an EPA permit as a hazardous waste generator. Waste is disposed of via the Defense Reutilization Marketing Office (DRMO).

A Hazardous Waste Minimization (HAZMIN) Center is currently under construction and will be ready for operation in Fall 2002. This is an upgrade of the existing storage units. The Center will control the hazardous materials purchases by all units on the base. Units will develop authorized use lists (AULs), and the HAZMIN Center will be stocked to support those AULs. Under this approach, the Center will issue only a 7-14 day supply to each tenant, and collect the empty containers after use. This procedure will facilitate the tracking required for Environmental Pollution Control and Reauthorization Act (EPCRA), and will also help in hazardous waste reduction and pollution prevention efforts. The full plan will begin to go into effect in Fall 2002.

4.7.2 Potential Impacts

Proposed Action. Only minor maintenance will be performed at the ISC. Currently, there is no established schedule for maintenance activities. While there is a reasonable expectation that the amount of hazardous materials (cleaning solvents, etc) will increase, this will not impact the capacity of current storage facilities. There is also a reasonable expectation that the amount of hazardous waste will also increase. This might result in filling up their 90-day storage barrels more frequently, but will not cause a problem for the ISC. Therefore, only minor adverse impacts are expected to occur. The MSST is expected to utilize the HAZMIN Center when it becomes operational in Fall 2002. The presence of the MSST will help to either deter intentional hazardous materials spills or a chemical, biological, or radiological attack or to more effectively respond if a terrorist attack of that nature should be successful.

No Action Alternative. Under the No Action Alternative, no additional concerns over current minor adverse impacts are expected.

4.8 Socioeconomics

4.8.1 Significance Criteria

NEPA requires an analysis of socioeconomic issues, if socioeconomic effects are interrelated with environmental effects. Socioeconomics are defined as the basic attributes and resources associated with the human environment, particularly population and economic activity.

The 13th USCG District and accompanying staff have been located in Seattle for almost 90 years. The district staff consists of 1,256 active duty personnel, 442 reserve personnel, and 81 civilian personnel. In addition to the district, Seattle is also home to Group Seattle, Station Seattle, Maritime Safety Office Puget Sound, Vessel Traffic Service Puget Sound, and Aids to Navigation Team Puget Sound. The MSST would be co-located with Group Seattle and would consist of 73 active duty personnel and 33 reserve personnel.

Impacts to socioeconomics would be significant if MSST activities resulted in any of the following:

- Impact on population affecting demand for housing, schools or community facilities
- Displacement of people, particularly from affordable housing
- Employment figures

4.8.2 Potential Impacts

Proposed Action. To comply with EO 12898 (Federal Actions to Address Environmental Justice in Minority and Low-income Populations), ethnicity and poverty status in the study area have been examined and compared to state and national statistics to determine if the Proposed Action could disproportionately affect minority or low-income groups. Based on the 1990 U.S. Bureau of Census data residents in eight of the ten counties in the ROI have a lower poverty level than the national poverty level (see Table 3-5). This analysis showed there would be minor beneficial impacts, if any, as a result of the Proposed Action.

EO 13045 requires that federal agencies identify and assess environmental health and safety risks that might disproportionately affect children. The Proposed Action would not pose any adverse or disproportionate environmental health risks (impacts) or safety risks (impacts) to children in the areas associated with the Proposed Action.

Given the comparatively small number of incoming personnel and families to the ROI, the quality of life for personnel might have minor adverse, if any, impacts.

It is anticipated that the new personnel assigned to ISC Seattle will consist of the same racial mix as those currently assigned. Given the comparatively small number of incoming personnel and families to the ROI, the demographics might have minor beneficial, if any, changes.

Given the comparatively small number of incoming personnel and families to the ROI, the regional economic activity may have minor, if any, beneficial impacts.

Furthermore, the increased protection from terrorist attacks would result in minor beneficial impacts to the safety and security of the population in and adjacent to the ROI.

Elliot Bay and the Duwamish Waterway are within the U&A fishing area of the Muckleshoot and Suquamish Indian Tribes. Treaty fishing activities in the vicinity of the ISC Seattle include salmon and steelhead net fisheries, and usually take place intermittently from mid-July until the end of November. The tribes use both gill net and skiff fishing. Nets are set adjacent to ISC Seattle's Pier 36 and just downstream from the ISC facility. Tribes have exclusive rights to commercial net fishing in Puget Sound and have full authority to make and enforce their own fisheries management plans.

The increase of personnel may have minor beneficial, if any impacts from potential additional customers.

No Action Alternative. Under the No Action Alternative, and for all socioeconomic resources, no additional concerns over current minor adverse impacts are expected. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and impacts to all levels of the economy.

4.9 Soils and Land Use

4.9.1 Significance Criteria

Land use generally refers to human modification of land, often for residential, economic, or recreational purposes. It also refers to use of land for preservation or protection of natural resources, such as wildlife habitat. Land uses frequently are regulated by management plans, policies, ordinances, and regulations that determine the types of uses that are allowable or that protect specially designated or environmentally sensitive uses.

The existing land use at ISC Seattle is consistent with the USCG Master Plan. Although not applicable to federal property, the Seattle Municipal Code designates the ISC Seattle vicinity as an "Urban Industrial"

environment. Land use along the entire shoreline is generally industrial with a number of marine terminals.

Impacts to land use would be significant if MSST activities resulted in any of the following:

- Conflicts with existing land use
- Inconsistent with existing land use
- Inconsistent with Coastal Zone Management Act (CZMA)

4.9.2 Potential Impacts

Soils

Proposed Action. The Proposed Action will not require any surface disturbance for construction, modification to existing piers, nor dredging. Therefore, there will be no impacts on soils from the Proposed Action.

No Action Alternative. Under the No Action Alternative, no additional concerns are expected for soils.

Land Use

Proposed Action. The Proposed Action is in compliance with the Port of Seattle's Master Plan and the USCG's ISC Master Plan. Therefore, there will be no impacts on land use from the Proposed Action.

Puget Sound falls within the definition of a Coastal Management Zone. The state of Washington passed an equivalent law, the Shoreline Management Act (SMA). The Act specifically states that federal and tribal owned lands are not included (Shoreline Management Act 1972). Therefore, the build-out of Building 7 is not affected by this act. The other shores within the ROI are subject to the SMA. However, due to the simultaneous repeal of the original 1972 guidelines and the invalidation of the recently adopted new guidelines, Washington State currently has no SMP guidelines in effect. (WSOE 2002.)

No Action Alternative. Under the No Action Alternative, no additional concerns are expected for land use.

4.10 Public Safety and Transportation

4.10.1 Significance Criteria

If implementation of the Proposed Action were to substantially increase risks associated with the safety of ISC Seattle and MSST personnel, contractors, or the local community, or substantially hinder the ability to

respond to an emergency, it would represent a significant impact. Furthermore, if implementation of the Proposed Action would result in incompatible land use with regard to safety criteria, impacts to safety would be significant. Impacts were assessed based on the potential effects of construction and demolition activities.

Public safety is one of the USCG's primary missions, as the USCG is the prominent overseer of maritime safety in all U.S. waters, including the high seas. The U.S. maritime transportation system is diverse. Geography, environmental conditions and the amount and types of vessel traffic are all aspects of the U.S. maritime system. The USCG's Vehicle Transportation System (VTS) and the Traffic Separation Scheme for the Port of Seattle helps to ensure that there is a safe and efficient movement of large cargo ships, ferries and goods into and out of the Port. They also coordinate with the Immigration and Customs Services. Since the events of September 11, 2001, the safety of the country's ports and its maritime system has received increased scrutiny and concern. It is due to those concerns that this Proposed Action is being considered.

It is extremely difficult to determine the level of significance and degree of impact in losing one (or more ships) and associated loss of life; therefore, no attempt to do so is made in this section.

4.10.2 Potential Impacts

Proposed Action. The Proposed Action will increase the USCG's ability to protect critical domestic ports and the U.S. Maritime Transportation System from warfare and terrorist attacks. The MSSTs' operations will closely parallel USCG traditional port security operations, but will provide complementary, non-redundant capabilities that will be able to close significant readiness gaps in our nation's strategic ports. The MSSTs will escort a variety of vessels and maintain specific security zones in each port. They are capable of operating seven days a week, 24 hours a day, in all weather conditions. They will operate with, and be supported by, both military and civilian government organizations, commercial and non-government entities. Significant beneficial impacts may be reasonably expected from the Proposed Action.

No Action Alternative. Under the No Action Alternative, the USCG will continue to provide port security at the current level. However, no additional boats and crews will be assigned to the Port of Seattle except in unusual circumstances. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life increases.

4.11 Infrastructure

4.11.1 Significance Criteria

Impacts to infrastructure would be significant if MSST activities resulted in any of the following:

- Insufficient fire and medical facilities
- Insufficient power and gas supply
- Insufficient sewage disposal capacity

4.11.2 Potential Impacts

Proposed Action. It is estimated that the additional personnel in this building will need less than one percent over current usage of electricity and gas. An increase in sewage would also be extremely small in comparison. Therefore, there would be minor adverse, if any, impacts as a result of the Proposed Action.

The additional personnel will also not add an appreciable burden to the City's Fire Department and Medical facilities. However, MSST personnel would work with local fire, emergency, police and other security offices in carrying out homeland security duties. Therefore, there would be minor adverse, if any impacts as a result of the Proposed Action.

No Action Alternative. Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and impacts to the infrastructure. Severe impacts in the capabilities of fire, police and medical services to deliver assistance to others may increase the potential for loss of life.

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5. Cumulative Impacts

5.1 Cumulative Impacts Methods

Cumulative impacts are defined as "the impacts that result from the incremental impact of the action, when added to other past, present, and foreseeable future action" (40 Code of Federal Regulations [CFR] 1508.7). Cumulative impacts can result from individually minor but collective impacts occurring over a period of time (see Table 5-1).

This cumulative impact analysis considers reasonably foreseeable programs, projects, or policies that may impact operations at Integrated Support Group (ISC) Seattle, add to the operations of the MSST, create a significant impact in Seattle and the surrounding areas. Information about on-going and future projects and programs has been identified from web searches, other National Environmental Policy Act (NEPA) documents, local newspaper articles, and discussions with knowledgeable U.S. Coast Guard (USCG) personnel. Based on professional judgment, potential impacts are identified as minor, moderate, or high and beneficial and adverse whenever possible.

5.2 Biological Resources

5.2.1 Proposed Action

Protected and Sensitive Habitats. The conclusion of the Pier 36 Replacement Environmental Assessment (EA) was a Finding of No Significant Impact (FONSI).

The replacement of the Alaskan Way Viaduct (Viaduct) that borders ISC Seattle and Elliott Bay would more than likely result in moderate to high adverse impacts unless mitigation measures can be agreed upon. NEPA documentation would address these potential impacts more specifically.

The MSST Action Alternative might result in minor adverse impacts to protected and sensitive habitats, although the increased level of protection would offset any impacts. The Proposed Action will be completed and operating for many years before the completion of the Viaduct. Therefore, the USCG's impact will be negligible in comparison.

Marine Mammals. Marine mammals are infrequent visitors to the Port of Seattle. The identified projects should not impact those mammals that find their way into Elliott Bay. In general, cumulative impacts for this resource are expected to be minor adverse.

Table 5-1. Programs and Projects Evaluated for Potential Cumulative Impacts

Proposed (or Existing) Action	Potential Cumulative Impacts
Replacement of Pier 35 Berth Alpha (Project currently on-hold)	Minor or moderate adverse air quality impacts during construction. Impacts will be short-term.
Movement of ISC Seattle from Pier 36 to Pier 90	This action is not expected to occur until 2007, if at all, and is outside the reasonable time frame for this EA.
Deepwater Program	ISC Seattle may receive new and/or additional cutters as a result of this Program. The number, types and time frame are unknown at this time. Additional NEPA documentation may be required.
Changes in custom and tariff laws that would increase the transport of hazardous waste	New provisions of the North American Free Trade Agreement may increase the transport of hazardous waste between countries. The potential impacts to the Port of Seattle and USCG operations are unknown at this time.
Changes in Department of Transportation (DOT) organization may result in the USCG being moved to a new Department of Homeland Security.	This reorganization is currently being debated in Congress. Impacts to the USCG operations are unknown and are too speculative to be analyzed at this time.
Green Line Monorail Project (Monorail)	This project would replace the current Worlds Fair Monorail and extend along Elliott Bay. If approved, completion expected by 2007. Impacts are unknown; however, if current proposed route is followed, there would be a stop near ISC Seattle. This would improve transportation and help relieve parking. Air quality would probably also be improved.
Alaskan Way Viaduct (Viaduct) Proposed by DOT and State DOT; Environmental Assessments not scheduled.	Start and end dates for project unknown, although large projects similar to this may take 10 years or more The Viaduct runs immediately adjacent to ISC Seattle. Construction may create temporary detours for USCG personnel. Long-term construction impacts to air quality unknown at this time.

Fish. The conclusion of the Pier 36 Replacement Project EA was a FONSI. The replacement of the Viaduct that borders ISC Seattle and Elliott Bay would more than likely result in a moderate to high adverse impact on the migration of salmonids and other anadromous fish unless mitigation measures can be agreed upon. This in turn would probably affect the amount and size of fish caught by the Muckleshoot and Squamish Tribes. NEPA documentation would address these potential impacts more specifically. The Proposed Action is expected to result in minor adverse impacts, which would be offset by the increased level of protection. If tariff laws were changed, the addition of hazardous waste

shipments from the Port would reasonably expect to raise the possibility of a spill. Impacts from such a spill would probably be moderately adverse to highly adverse. The effects of such a spill would be somewhat offset by the increased response provided by the MSST. However, these proposals are in the future, and the Proposed Action will be completed and operating for many years before the completion of the Viaduct or changes to the tariff laws. Therefore, the USCG's impact will be negligible in comparison.

Coastal and Other Birds. The Proposed Action is not anticipated to have more than minor adverse impacts, if any. However, the proposed Monorail may impact the eagle and peregrine falcon nesting sites. This would reasonably be considered a highly adverse impact under ESA. NEPA documentation would address these potential impacts more specifically. The Monorail project will take many years to complete and the Proposed Action will be completed and operating for many years before the completion of that project. Therefore, the USCG's impact will be negligible in comparison.

5.2.2 No Action Alternative.

Protected and Sensitive Habitats. No Action would result in a lower level of port security, thereby increasing the potential for a terrorist attack, which might result in loss of life and significant adverse impacts on protected and sensitive habitats. Based on the proposed replacement of the Viaduct, the impacts to the Muckleshoot and Squamish Tribes might still be moderately adverse usual and accustomed fishing areas

Marine Mammals. Since none of the proposed projects are expected to impact marine mammals, neither should the No Action Alternative. However, under the No Action Alternative, the MSST will not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and significant adverse impacts on marine mammals.

Fish. Based on the proposed replacement of the Viaduct and the degree of physical disturbance that might result, the impacts to fish might still be moderately adverse. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and significant adverse impacts on fish in general and the Muckleshoot and Squamish Indians fishing rights, in particular.

Coastal and Other Birds. Based on the proposed route of the Monorail, impacts on the eagle and peregrine falcon nesting sites would reasonably be considered highly adverse under the Endangered Species Act (ESA). NEPA documentation would address these potential impacts more specifically. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of

port security, thereby increasing the potential for a terrorist attack that might result in loss of life and significant adverse impacts on these birds.

5.3 Water Resources

5.3.1 Proposed Action

The conclusion of the Pier 36 Replacement EA was a FONSI. If tariff laws were changed, the addition of hazardous waste shipment from the Port would reasonably expect to raise the possibility of a spill. Impacts from such a spill would probably be moderately adverse to highly adverse. Potential impact from the Proposed Action is considered minor adverse, although increased protection would help offset any impacts. In addition, the effects of such a spill would be somewhat offset by the increased response provided by the MSST.

Construction of the Viaduct would also result in an expectation for moderate adverse to highly adverse impacts to surface waters. NEPA documentation would address these potential impacts and any mitigation actions that may be necessary. Cumulatively, water resources may experience moderately to high adverse impacts. However, these proposals are in the future, and the Proposed Action will have been completed and operating for many years before the completion of the Viaduct or changes to the tariff laws. Therefore, the USCG's impact will be negligible in comparison.

5.3.2 No Action Alternative

The impacts from the No Action Alternative are considered minor adverse. However, if the other proposed projects proceed (tariff laws, Viaduct), cumulative impacts to surface waters would be moderately to highly adverse. However, these proposals are in the future, and the Proposed Action will be completed and operating for many years before the completion of the Viaduct or changes to the tariff laws. Therefore, the USCG's impact will be negligible in comparison. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and significant adverse impacts to surface waters, and in turn, fish, birds and marine mammals.

5.4 Cultural and Historical Resources

5.4.1 Proposed Action

The conclusion of the Pier 36 Replacement EA was a FONSI. No effects would be expected under the Proposed Action because there would be no change to existing archaeological, historical, and cultural resources. It may reasonably be expected that the current Viaduct is also built on fill material and would have no artifacts of archaeological, historical or cultural interest. However, little is known about the

locations of the piers and stations for the proposed Monorail, although most, if not all, the proposed land has been highly disturbed through the years. Surveys would be necessary to confirm there are no archaeological resources in the proposed pier sites. Cumulative impacts would be considered to be minor adverse. Parts of Building 7 are undergoing modification as office and conference spaces and changing rooms for MSST personnel. Based on its history, the USCG does not believe that this building is eligible for the National Register of Historic Places (NRHP). However, they are currently undergoing consultation with the State Historic Preservation Office (SHPO). There are a number of cultural and historical resources in and around Puget Sound. The presence of the MSST will provide additional protection through indirect benefits.

5.4.2 No Action Alternative

No effects would be expected from the No Action alternative. No effects would be expected from the Viaduct. Surveys would be needed to confirm there are no archaeological resources under the proposed Monorail. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and significant adverse impacts to other cultural and historical resources on or adjacent to Puget Sound and Seattle.

5.5 Air Quality and Climate

5.5.1 Proposed Action

The conclusion of the Pier 36 Replacement EA was a FONSI. Minor adverse impacts to air quality might result from the build-out of Building 7, although they would be short term. Since exact emissions, operations, and locations of the MSST operations are unknown at this time, it is assumed that moderate adverse impacts will occur as a result of the Proposed Action. It is anticipated that there would be minor adverse impacts on air quality in the region from fuel handling. Since the maintenance schedule is not known, but taking into consideration that all maintenance at the ISC will be minor, it is anticipated that there would be minor adverse impacts on air quality from this activity. Major maintenance would occur at a military or an approved commercial facility, which would have appropriate permits. The number of additional personnel is comparatively small and would result in minor adverse impacts to air quality from increased transportation. Changes in tariff laws, which might allow an increase in hazardous waste, may impact air quality if there is a release and the nature and extent of the release. It is reasonable to expect such an incident may occur. Impacts to air quality would be expected to be moderately adverse, although they would be offset by the greater level of protection provided by the MSST. The construction of the Monorail and the Viaduct may also result in impacts to air quality from a moderate to adverse impact during construction. Although the result of the Monorail Project may be a beneficial impact since fewer

cars will be driven in the downtown area. However, these projects are in the future, and the Proposed Action will have been completed and operating for many years before the completion of the Viaduct or the Monorail. Therefore, the USCG's impact will be negligible in comparison.

5.5.2 No Action Alternative

Under the No Action Alternative, the impacts from the build-out of Building 7, air emissions from operations, maintenance, fuel handling and personnel transportation would be non-existent. However, the impacts from tariff laws, and the construction of the Monorail and the Viaduct would remain. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and significant adverse impacts to the environment in Puget Sound and Seattle.

5.6 Noise

5.6.1 Proposed Action

The conclusion of the Pier 36 Replacement EA was a FONSI. The actual increase of six 25-foot vessels is a small increase in noise when compared to the currently existing traffic already using this port. Therefore, is anticipated that noise impacts from the Action Alternative would be minor adverse, if any. In the Puget Sound areas where on-shore development is relatively sparse, noise impacts may be moderately adverse. Noise impact to marine mammals, which are infrequent visitors, will not create greater than minor adverse impacts. The conclusion of the Pier 36 Replacement EA was a FONSI. Noise generated from the construction of the Viaduct and the Monorail would be expected to be moderate to highly adverse during construction activities. However, these projects are in the future, and the Proposed Action will have been completed and operating for many years before the completion of the Viaduct or the Monorail. Therefore, the USCG's impact will be negligible in comparison.

5.6.2 No Action Alternative

If the No Action Alternative were selected, the potential noise sources would be the construction of the Viaduct and the Monorail. Noise impacts would be expected to be moderate to highly adverse during construction. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and interruption of the construction of the Viaduct and Monorail.

5.7 Hazardous Materials and Hazardous Wastes

5.7.1 Proposed Action

The conclusion of the Pier 36 Replacement EA was a FONSI. The Proposed Action will result in minor adverse impacts as a result of minor increases in both hazardous materials and hazardous wastes. If tariff laws are changed, the amount and types of hazardous wastes that may be shipped out of the Port is unknown. It is also unknown the types and amounts of hazardous materials that will be needed for construction of the Viaduct and the Monorail. Also unknown are the types and amounts of hazardous wastes that will be generated by these projects. The Proposed Action will help to deter intentional hazardous materials spills and more effectively trigger a response if a terrorist attack of that nature should be successful. This increased level of protection would offset the small increase in amounts of hazardous materials and hazardous wastes that will result from the Proposed Action. In addition, these projects are far in the future, and the Proposed Action will be completed and operating before the others are completed. Therefore, the USCG's impact will be negligible in comparison.

5.7.2 No Action Alternative

If the No Action Alternative was selected, no impacts above the current minor level are expected. However should the Viaduct, the Green Line Monorail and the change in tariff laws occur, then impacts may be expected to be moderate to highly adverse. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and disruption of the construction of the Viaduct and Monorail. The additional presence of the MSST would not be available to deter terrorist attacks on hazardous materials and hazardous waste shipments.

5.8 Socioeconomics

5.8.1 Proposed Action

The conclusion of the Pier 36 Replacement EA was a FONSI. The analysis conducted to comply with EO 12898 showed there would only by minor beneficial impacts, if any, as a result of the Proposed Action. The analysis required to comply with EO 13045 showed that the Proposed Action would not pose an adverse or disproportionate environmental health risks or safety risks to children in the areas associated with the Proposed Action. Given the comparatively small number of incoming personnel and families to the ROI, the impacts on, if any, the quality of life for these personnel might be minor adverse. It is anticipated that the new personnel assigned to ISC Seattle will consist of the same racial mix as those currently assigned. Given the comparatively small number of incoming personnel and families to the ROI, the demographics might have minor beneficial, if any, changes. Given the comparatively small

number of incoming personnel and families to the ROI, the regional economic activity may have minor, if any, beneficial impacts. Fishing is an important economic resource for the Muckleshoot and Suquamish Tribes. The increase of personnel (and potentially additional customers) may have minor beneficial impacts, if any. The proposed Viaduct and Monorail will create a number of jobs during construction. The operation of the Monorail will also create additional jobs. The socioeconomic impacts associated with these construction projects and operation of the Monorail is not known. NEPA documentation will address these beneficial impacts. Cumulatively, socioeconomics may be expected to have minor to moderately beneficial impacts. However, these proposals are in the future, and the Proposed Action will be completed and operating for many years before the completion of these projects. Therefore the USCG's impact will be negligible in comparison. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and significant adverse impacts to surface waters, and in turn, fish, birds and marine mammals.

5.8.2 No Action Alternative

If the No Action Alternative is chosen, the minor beneficial impacts identified above will not occur. However, if the proposed Viaduct and the Monorail construction projects occur, there will be an increase in the number of jobs during this period. Cumulatively, socioeconomics may be expected to have minor to moderately beneficial impacts. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and disruption of the construction of the Viaduct and Monorail.

5.9 Soils and Land Use

5.9.1 Proposed Action

The conclusion of the Pier 36 Replacement EA was a FONSI. Under the Action Alternative no impacts are anticipated, since soils will not be disturbed and land use will remain the same. Construction of the Viaduct is expected to encounter soil problems due to the fill material previously used under the viaduct itself and from the seawall supporting the current Viaduct. Soils under the proposed Monorail route are unknown. Cumulatively, soils impacts may be considered moderately to highly adverse. The replacement of Pier 36 and the construction of the Viaduct are consistent with the appropriate Master Plans. It is unknown if the Monorail will require any zoning variances along its proposed route. Cumulatively, land use impacts may be considered minor to moderately adverse. Since the Proposed Action does not require any construction activities, it does not contribute to cumulative impacts for this resource.

5.9.2 No Action Alternative

The No Action Alternative will not result in any impacts to soils and land use. The construction of the Viaduct may encounter soil problems. The soils under the proposed Monorail are unknown. Cumulatively, with these two projects, soils impacts may be considered moderate to highly adverse. It also appears that the Viaduct is consistent with current land use plans. It is unknown if the Monorail will require any zoning variance along its proposed route. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and disruption of the construction of the Viaduct and Monorail.

5.10 Public Safety and Transportation

5.10.1 Proposed Action

The Proposed Action will increase the USCG's ability to protect critical domestic ports and the U.S. Maritime Transportation System from warfare and terrorist attacks. This is a highly beneficial impact. The conclusion of the Pier 36 Replacement EA was a FONSI. Tariff changes, with a potential increase in hazardous waste transport, could impact public safety should a spill occur. This would result in a minor to moderately adverse impact. The construction of the Viaduct and the Monorail would increase public safety (fewer cars on the road) and improve transportation corridors (making it easier for people to get around). Cumulatively, impacts to public safety and transportation could be considered minor to moderately beneficial. In addition, the Proposed Action will help to deter attacks on the Maritime Transportation System and intentional hazardous materials spills and more effectively respond if a terrorist attack of that nature should be successful.

5.10.2 No Action Alternative

The No Action Alternative will result in the USCG continuing the same level of port security with existing cutters and personnel. This could result in a highly adverse impact. If the other projects identified above continue, then public safety and transportation impacts can be considered minor to moderately beneficial. Under the No Action Alternative, the MSST would not be stood-up. This would result in a lower level of port security, thereby increasing the potential for a terrorist attack that might result in loss of life and disruption of the Maritime Transportation System. There would also be no deterrence for terrorists to create intentional hazardous materials spills.

5.11 Infrastructure

5.11.1 Proposed Action

The conclusion of the Pier 36 Replacement EA was a FONSI. There would be minor adverse, if any, impacts to electricity, water, gas and sewage from the build-out and occupation of Building 7. The amounts of electricity, water, and gas that would be needed for the construction of the Viaduct and the Monorail are unknown. The amount of electricity that would be needed to power the Monorail is also unknown. These projects are far in the future, and the Proposed Action will have been completed and operating years before these other projects are completed. Therefore, USCG impacts to infrastructure use are negligible. In addition, the Proposed Action will also provide local police, fire and medical personnel support in the case of a terrorist attack. The USCG's response and support will offset any impacts to use of the infrastructure.

5.11.2 No Action Alternative

The impacts to infrastructure from the No Action Alternative are considered to be minor adverse, if any. If the construction of the Viaduct and Monorail occur, then the amounts of electricity, water, and gas are unknown. Cumulatively, impacts to the infrastructure could be considered moderate adverse during construction. Impacts after construction could be considered minor adverse.

Under the No Action Alternative, existing conditions would remain as is and the MSST would not be stood up. The USCG would maintain the current level of protection, which has been determined to be insufficient. Impacts of selecting this alternative would be considered significantly adverse due to the potential of terrorist attacks on U.S. ports, with the potential for loss of life and impacts to the infrastructure. Severe impacts in the capabilities of fire, police and medical services to deliver assistance to others may increase the potential for loss of life.

6. List of Preparers

Jayne Aaron
engineering-environmental Management, Inc. (e^2M)
M.A. Environmental Policy and Management
B.A. Environmental Design
Years of Experience: 10
Responsible for: Cultural and Historical Resources

Edgar Deskins
e^2M
B.S. Biology
Years of Experience: 11
Responsible for: Air Quality and Physical Resources

Melissa Ellinghaus
e^2M
M.E.S. Environmental Policy
B.S. Biology
Years of Experience: 3
Responsible for: Socioeconomics

Andrea Gingerich
e^2M
B.S. Environmental Science
Years of Experience: 3
Responsible for: General Biological Resources

Gino Giumarro
e^2M
M.S. Natural Resources Planning
B.S. Wildlife Biology
Years of Experience: 4
Responsible for: Fish, Marine Mammals, Wildlife

Gus Hare
e^2M
B.S. Environmental Science
Registered Environmental Professional
Years of Experience: 7
Responsible for: Noise

Brian Hoppy
e^2M
Program Manager
B.S. Biology
Certificate of Environmental Management
Years of Experience: 12

Joan Lang
e^2M
Project Manager
B.A. History and Political Science
Years of Experience: 20

Cheryl Myers
e^2M
A.A.S. Nursing
Years of Experience: 25
Responsible for: Graphics and Editing

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7. References

ANSI 1990 — American National Standards Institute (ANSI). 1990. *Sound Level Descriptors for Determination of Compatible Land Use.* ANSI S12.40-1990. New York, N.Y.: Acoustical Society of America.

Congress 2001a — U.S. Congress (Congress). 2001a. Committee Report; 107th Congress; 1st Session; Senate Report 107-107.

Congress 2001b — U.S. Congress (Congress). 2001b. Committee Report; 107th Congress; 1st Session; House Report 107-350 (to accompany HR 3338).

DCD 1990 — Department of Community Development (DCD). 1990. Office of Archaeological and Historic Preservation letter to U.S. Coast Guard, regarding Building 1, August 28, 1990.

EPA 1978 — U.S. Environmental Protection Agency (EPA). 1978. *Protective Noise Levels: Condensed Version of EPA Levels Document.* EPA-550/9-79-100. Springfield, VA. National Technical Information Service.

EPA 1999 — U.S. Environmental Protection Agency (EPA). 1999. Air Data. Net Tier Report. *http://www.epa.gov/air/data/nettier.html?st~WA~Washington*

EPA 2002 — U. S. Environmental Protection Agency (EPA). 2002. Office of Water. National Estuary Program. Bringing Our Estuaries New Life. *http://www.epa.gov/owow/estuaries.* Accessed May 24, 2002.

FICON 1992 — Federal Interagency Committee on Noise (FICON). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. August 1992.

HistoryLink 2002 — HistoryLink. 2002. "Capitol Improvement Projects;" "Seattle Central Waterfront Tour, Part: 1: Overview;" "Seattle Central Waterfront Tour, Part: 6: From Railroad Avenue to Alaskan Way;" "Straightening of Duwamish River begins on October 14, 1913." *http://www.historylink.org.* Accessed May 2002.

NOAA 1990 — National Oceanic and Atmospheric Administration (NOAA). 1990. NWS Climate Table. *http://www.nws.noaa.gov/climatex.html.* Accessed May 2002.

NOAA 2002 — National Oceanic and Atmospheric Administration (NOAA). 2002. Habitat Conservation Division. 2001 NOAA Fisheries. National Marine Fisheries Service, Habitat Conservation Division, "EFH Assessment Template". *http://www.nwr.noaa.gov.* Accessed May 24, 2002.

ONR 2000 — Office of Naval Research (ONR). 2000. Draft Environmental Impact Statement for the North Pacific Acoustic Laboratory. Arlington, Virginia. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Protected Resources, Silver Spring, Maryland. State of Hawaii, Department of Land and Natural Resources, Honolulu, Hawaii. May 2000.

PSWQAT 2002 — Puget Sound Water Quality Action Team (PSWQAT). 2002. "Puget Sound Water Quality Plan 2002." Adopted December 14, 2002.

Richardson et al. 1995 — Richardson, W.J., C.R. Greene, C.I. Malme, and D.H. Thomson (Richardson et al.). 1995. Marine Mammals and Noise. Academic Press.

Scala 2002 — Scala, Anne. 2002. Personal communication from Anne Scala, PE, Environmental Branch Chief USCG ISC Seattle

Schilling 2002 — Schilling, Kirk. 2002. Personal communication from LCDR Kirk Schilling, (G-OPD)

Seattle 2002	City of Seattle (Seattle). 2002. Salmon Friendly Seattle. *http://www.cityofseattle.net/salmon*. Accessed May 22, 2002.
Times 2002	Seattle Times (Times). 2002. "Take a Look at What the Growth Boundary Created." June 5, 2002.
U.S. Bureau of Census 1990	U.S. Bureau of Census. 1990. Census of Population and Housing. Generated using Harden Political InfoSystem. *http://govinfo.library.orst.edu*. Accessed May 2002.
U.S. Bureau of Census 2000	U.S. Bureau of Census. 2000. Census of Population and Housing. Generated using Quickfacts. *http://quickfacts.census.gov*. Accessed May 2002.
USCG 1996	U.S. Coast Guard (USCG). 1996. NEPA Final Environmental Impact Statement (Volume I) for the U. S. Coast Guard Living Marine Resources (APLMR) Initiative. Also by Battelle Ocean Sciences. October 31, 1996.
USCG 1997	U.S. Coast Guard (USCG). 1997. Coast Guard Vessel and Speed Approach Guidance.
USCG 2002a	U.S. Coast Guard (USCG). 2002a. U.S. Coast Guard/G-I Web page "Homeland Security and the New Normalcy." *http://www.uscg.mil/overview/homeland%20security.htm*. Accessed May 18, 2002.
USCG 2002b	U.S. Coast Guard (USCG). 2002b. U.S. Coast Guard/G-IPA Web page "Homeland Security." *http://www.uscg.mil/news/homeland_security/homeland_security.htm*. Accessed May 18, 2002.
USCG 2002c	U.S. Coast Guard (USCG). 2002c. U.S. Coast Guard (G-OPD) Handout provided by Lt. Galman. April 26, 2002.
USCG 2002d	U.S. Coast Guard (USCG). 2002d. U.S. Coast Guard (G-OP) "Concept of Operations" presentation and handout.
USCG 2002e	U.S. Coast Guard (USCG). 2002e. Statement of Work: NEPA Compliance for Coast Guard Location and Operation of Marine Safety and Security Teams in Seattle, WA, Chesapeake, VA, Galveston, TX, and San Pedro, CA.
USCG 2002f	U.S. Coast Guard (USCG). 2002f. U.S. Coast Guard Final Programmatic Environmental Impact Statement for the Integrated Deepwater System Project. March 22, 2002.
USCG 2002g	U.S. Coast Guard (USCG). 2002g. Coast Guard Missions. *http://www.uscg.mil*. Accessed May 1, 2002.
USCG 2002h	U.S. Coast Guard (USCG). 2002h. Final Environmental Assessment for Replacement of Pier 36 Berth Alpha. Facilities Design and Construction Center (Pacific). March 2001.
USCG Undated	U.S. Coast Guard (USCG). Undated. Shipboard Marine Engines Testing for the U.S. Coast Guard, Final Report. Volpe National Transportation Systems Center and U.S. Coast Guard Headquarters Naval Engineering Division. The report is undated; testing conducted in 1996.
USDOT 1980	U.S. Department of Transportation (OSDOT). 1980. Guidelines for Considering Noise in Land Use Planning and Control, Federal Interagency Committee on Urban Noise. June 1980.
Vogel 2002	Vogel, John. 2002. Personal communication from John Vogel, Environmental Engineer, FD&CC, Pacific
WSOA 2002	Washington State Office of Archaeology (WSOA). 2002. Historic Properties List *http://www.ocd.wa.gov/info/lgd/oahp/records*. Accessed June 26, 2002.

WSOE 2002 Washington State Office of Ecology (WSOE). 2002. Shoreline Management Act Guidelines for Shorelands and Wetlands, 2002. *http://www.ecy.wa.gov/programs/sea/SMA/guidelines*. Accessed June 24, 2002.

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APPENDIX A

DEAR INTERESTED PARTY LETTER AND ATTACHMENT

U.S. Department of Transportation
United States Coast Guard

Commandant
U. S. Coast Guard

2100 2nd Street, SW
Washington, DC 20593-0001
Staff Symbol: G-OPD
Phone: 202-267-2039
FAX: 202-267-4278

16475
MAY 13 2002

Dear Interested Party:

The United States Coast Guard is announcing its intent to prepare an Environmental Assessment (EA) for the establishment of Maritime Safety and Security Teams (one each) in Seattle, WA; Chesapeake, VA; Galveston, TX; and San Pedro, CA. Preparation of the EAs is being conducted in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations at 40 Code of Federal Regulations, Part 1500. These first four Maritime Safety and Security Teams (MSSTs) are being established to increase the Coast Guard's ability to protect critical domestic ports and the U.S. Maritime Transportation System from warfare and terrorist attacks. The MSSTs' operations will closely parallel Coast Guard traditional port security operations, but will provide complementary, non-redundant capabilities that will be able to close significant readiness gaps in our nation's strategic ports. In addition to the four MSSTs mentioned above, the Coast Guard is planning to stand up MSSTs in other critical ports around the country. Additional NEPA analysis will be prepared for any future ports as necessary.

The EAs will address the overall environmental impacts of establishing and operating each of the first four MSSTs including the implementation of minor shore side infrastructure to accommodate 106 MSST personnel, equipment and the operation of 6 new 25' response boats in each of the above-mentioned ports. The urgency of the MSST security mission has resulted in an implementation schedule that directs the Seattle, WA MSST to be operational by July 1, 2002; Chesapeake, VA MSST to be operational by August 1, 2002; Galveston, TX MSST to be operational by September 1, 2002; and San Pedro, CA to be operational by September 1, 2002. Public input is important in the preparation of these EAs. Your concerns and comments regarding the implementation of these MSSTs and their possible environmental impacts are important to the Coast Guard. You are invited to submit comments by May 31, 2002 using only one of the following means:

(1) By mail to:

Headquarters, U.S. Coast Guard
Captain Wayne Buchanan
Chief, Office of Defense Operations (G-OPD)
Room 3121
2100 Second Street, SW
Washington, DC 20593

(2) Or, by fax to LCDR Kirk Schilling at (202) 267-4278.
(3) Or by E-mail to KSchilling@comdt.uscg.mil.

In choosing among the above means for submitting your comments, please give due regard to the recent difficulties and delays associated with delivery of mail through the U.S. Postal Service to Federal facilities in the Washington area.

Written comments should include your name, address, and the specific location to which the comment relates. The Coast Guard will consider all comments received by May 31, 2002 in the development and completion of each EA.

Sincerely,

W. BUCHANAN
Captain, U. S. Coast Guard
Chief, Office of Defense Operations

Encl: (1) MSST Overview

Maritime Safety and Security Team (MSST) Overview

Background:
In October 1995, the Secretaries of Transportation and the Department of Defense, the Chief of Naval Operations and the Commandant of the Coast Guard (CG) signed a Memorandum of Agreement that identified the unique national defense capabilities of the CG. Domestic port security and protection has long been a core CG mission. However, in the wake of September 11th, emerging threats to the U. S. homeland has prompted an increased CG focus on protecting domestic ports and the U.S. Maritime Transportation System from warfare and terrorist threats.

Maritime Safety and Security Teams:
The CG's answer is Maritime Safety and Security Teams (MSSTs). While other solutions are underway or being considered, the stand-up (establishment and operations) of the MSSTs at Seattle, WA; Chesapeake, VA; San Pedro, CA and Galveston, TX are the actions that will be considered in these Environmental Assessments.

Each MSST will consist of 73 active duty personnel and 33 reserve personnel (these will consist of mostly reassigned personnel although there may be some newly recruited personnel as well), support buildings for personnel, and six response boats for each MSST. All six boats can, but will not necessarily, be operating at once. The response boats will have outboard motors, will be no larger than 25 feet, will be highly maneuverable, will be capable of quickly reaching and sustaining high speeds (40 knots), and will carry between three and six crewmembers. Other requirements will include, but not be limited to, communication equipment, protection for the crew, and appropriate weaponry. When not in use, the response boats are capable of being placed on boat trailers.

Maritime Safety and Security Teams will normally conduct operations in protected waters such as a harbor or port. MSSTs are primarily intended for domestic operations, in support of the Coast Guard Group commanders or Captains of the Port (COTP). Operations will closely parallel existing CG traditional port security operations, but will provide complementary, non-redundant capabilities that will be able to close significant readiness gaps in our nation's strategic ports. The MSSTs will escort a variety of vessels and maintain specific security zones in each port. They are capable of operating 7 days a week, 24 hours a day, in weather conditions from tropical climates to near artic conditions. They will operate with, and be supported by, both military and civilian government organizations, commercial and non-government entities. MSSTs will be transportable via land transportation, Coast Guard cutter, and Coast Guard or other military aircraft worldwide. MSST personnel will be employed for operations consistent with training and readiness. In summary, the MSST will:

- Augment a Coast Guard Group or COTP to enhance port safety and security, and law enforcement capabilities at economic or military significant ports.
- Deploy for specific episodic events that require an increased security posture for a limited duration.

- Transport all equipment and material via aircraft or ground or cutter transportation. Exercise security contingency plans in major ports.
- Detachments may also augment COTPs as Sea Marshals and deploy for port familiarization and training.

Locations:
Each MSST will be located at or near an existing Coast Guard command in the vicinity of a regionally significant economic or military port. The criteria used to select these ports and the priority in which the MSSTs are stood up is based on a number of factors, including, but not limited to, the level of current port protection available, the amount and type of cargo transiting the port facilities, and the concentration of critical Department of Defense facilities. Additional ports are currently being evaluated.

Co-locating MSSTs with or near existing Coast Guard commands, will maximize the use of existing infrastructure (i.e.: electric, water and communications) and already assigned personnel, although in some cases, additional personnel may be necessary. We anticipate maximizing the use of existing facilities for MSST personnel during working hours (e.g., leasing existing facilities, renovating existing buildings, etc.); however, in San Pedro, CA, there is the possibility that we will stand up some temporary trailers on already developed property. We do not anticipate any new construction. We anticipate MSST personnel will reside in the local area.

APPENDIX B

MAILING LIST

Establishment of Marine Safety and Security Teams at Seattle, WA
Environmental Assessment
Interagency and Intergovernmental Coordination for Environmental Planning List

---

Dr. Usha Varanasi
Director of Science and Research
National Marine fisheries Service
Northwest Fisheries Science Center
2725 Montlake Blvd. East
Seattle, WA 98112-2097

Mr. Richard Parkin
Unit Manager, Geographic Implementation Unit
USEPA Region 10
Office of Ecosystems and Communities
1200 Sixth Avenue
Seattle, WA 98101-1127

Dave Brittell
Asst. Director of Admin. Services
Dept. of Fish and Wildlife
600 Capitol Way, North
Olympia, WA 98501-1091

Allyson Brooks
SHPO
Office of Archeology and Historic Preservation
P.O. Box 48343
420 Golf Club Road, SE, Suite 201, Lacy
Olympia, WA 98504-8343

Ms. Barbara Ritchie
NEPA Coordinator
Environmental Coordination Section
Washington Department of Ecology
P.O. Box 47703
Olympia, WA 98504-7703

Mr. Larry Ross
Environmental Project Manager
Washington Department of Transportation
Environmental Affairs Office
P.O. Box 47331
Olympia, WA 98504-7331

Jennifer Blecher
Commissioner of Public Lands
Washington Department of Natural Resources
P.O. Box 47001
Olympia, WA 98504-7001

Dave Mann
President, Washington Environmental Council
615 2nd Ave, #380
Seattle, WA 98104

Mr. Tom Fitzsimmons
Director, Washington State Dept. of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Mr. Hugo R. Flores
Washington State DNR
Aquatic Resource
P.O. 47027
Olympia, WA 98504-7027

Environmental Coordinator
Chehalis Confederated Tribes
P.O. Box 536
Oakville, WA 98568

David Youckton
Chairman, Confederated Tribes of the Chehalis Reservation
P.O. Box 536
Oakville, WA 98568

Colleen Lee
Chairperson, Hoh Tribal Business Committee
2464 Lower Hoh Road
Forks, WA 98331

Environmental Coordinator
Jamestown Klallam Tribe
305 Old Blyn Highway
Sequim, WA 98382

Ron Allen
Chairman, Jamestown S'Klallam Tribal Council
1033 Old Blyn Highway
Sequim, WA 983822

Environmental Coordinator
Lower Elwha Klallam tribe
1666 Lower Elwha Road
Port Angeles, WA 98362-0298

Russell Hepfer
Chairman, Lower Elwha Tribal Council
2851 Lower Elwha Road
Port Angeles, WA 98363

Timothy Ballew
Chairman, Lummi Indian Business Council
2616 Kwina Road
Bellingham, WA 98226

Environmental Coordinator
Lummi Tribe
2616 Kwina Road
Bellingham, WA 98226-9298

Greg Argel
Self-Governance Specialist
Makah Field Office
Bureau of Indian Affairs
P.O. Box 115
Neah Bay, WA 98357

Ben Johnson
Chairman, Makah Indian Tribal Council
P.O. Box 115
Neah Bay, WA 98357

Environmental Coordinator
Makah Tribe
P.O. Box 115
Neah Bay, WA 98357

John Daniels
Chairman, Muckleshoot Tribal Council
39015 172nd Ave, SE
Auburn, WA 98092

Mr. Jeff Parsons
Executive Director, National Audubon Society
Washington State Office
P.O. Box 462
1063 Capital Way South, Room 208
Olympia, WA 98507

A.D. Grantham
Navy League US
15703 SE 45th Ct.
Bellevue, WA 98006

Stephanie Scott
Chairperson, Nisqually Indian Community Council
4820 She-Nah-Num Drive, SE
Olympia, WA 98513

Art George
Chairman, Nooksack Indian Tribal Council
P.O. Box 157
Deming, WA 98244

Ray Maldonado
Superintendent, Olympic Peninsula Agency
Bureau of Indian Affairs
P.O. Box 48
Aberdeen, WA 98520

Kate Janeway
President of the Board of Directors
People for Puget Sound
Headquarters
1402 Third Avenue, 1200
Seattle, WA 98101

Ronald Charles
Chairman, Port Gamble S'Klallam Tribe
31912 Little Boston Road, NE
Kingston, WA 98346

Dakota Chamberlain
Port of Seattle
2711 Alaskan Way So.
Seattle, WA 98121

Henry Yates
Port of Seattle
2711 Alaskan Way So.
Seattle, WA 98121

William Black
Superintendent, Puget Sound Field Office
Bureau of Indian Affairs
2707 Colby Ave
Suite 1101
Everett, WA 98201-3528

Lawrence PaPointe
Chairman, Puyallup Tribal Council
2002 E. 28th Street
Tacoma, WA 98404

Russell Woodruff
Chairman, Quileute Tribal Council
P.O. Box 279
LaPush, WA 98350

Pearl Capoeman-Baller
President, Quinault Indian Nation
Business Committee
P.O. Box 198
Taholah, WA 98587

Ken Hansen
Chairman, Samish Indian Nation
P.O. Box 217
1618 D Avenue
Anacortes, WA 98221

Jason Joseph
Chairman, Sauk-Suiattle Tribal Council
5318 Chief Brown Lane
Darrington, WA 98241

Director, Northwest Region
Sierra Club
Cascade Chapter
8511 15th Ave, Room 201
Seattle, WA98115-3101

Mr. Bill Arthur
Director
Northwest Office
180 Nickerson Street, Suite 103
Seattle, WA 98109

Denny Hurtado
Chairman, Skokomish Tribal Council
N. 80 Tribal Center Road
Shelton, WA 98584

Joseph Mullen
Chairman, Snoqualmie Tribal Organization
P.O. Box 670
Fall City, WA 98024

David Lopeman
Chairman, Squaxin Island Tribal Council
SF 70, Squaxin Lane
Shelton, WA 98584

Edward Goodridge
Chairperson, Stillaguamish Board of Directors
P.O. box 277
Arlington, WA 98223

Bennie Armstrong
Chairman, Suquamish Tribal Council
P.O. Box 498
Suquamish, WA 98392

Herman Williams
Chairman, Tulalip Board of Directors
6700 Totem Beach Road
Marysville, WA 98271

Marilyn Scott
Chairperson, Uppoer Skagit Tribal Council
25944 Community Plaza Way
Sedro Wolley, WA 98284

Mr. J. Larry Scudder
US Army Corps of Engineers
Seattle District
P.O. Box 3755
Attn: PM-C
Seattle, WA 98124-3755

Mr. Charles Clarke
Regional Adminstrator
USEPA Region 10
1200 Sixth Avenue
Seattle, WA 98101

Mr. David Schneidler
Port of Seattle
Committee for Emergency Preparedness
P.O. Box 1209
Seattle, WA 98111

Commissioner, Port of Seattle
P.O. Box 1209
Seattle, WA 98111

Mr. Gary Morris
Chief, City of Seattle Fire Department
301 Second Street
Seattle, WA 98104

Mr. R. Gil Kerlikowske
Chief, City of Seattle Police Department
610 Third Ave
Seattle, WA 98104

Honorable Gary Locke
Governor
State of Washington
Legislative Building
P.O. Box 40002
Olympia, WA 98504-0002

APPENDIX C

NEWSPAPER ANNOUNCEMENT

PUBLIC NOTICE

Environmental Assessments for Maritime Safety Security Teams (MSSTs) US Coast Guard

The United States Coast Guard is announcing its intent to prepare an Environmental Assessment (EA) for the establishment of Maritime Safety and Security Teams (one each) in Seattle, WA; Chesapeake, VA; Galveston, TX; and San Pedro, CA. Preparation of the EAs is being conducted in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations at 40 Code of Federal Regulations, Part 1500. These first four Maritime Safety and Security Teams (MSSTs) are being established to increase the Coast Guard's ability to protect critical domestic ports and the U.S. Maritime Transportation System from warfare and terrorist attacks. The MSSTs' operations will closely parallel Coast Guard traditional port security operations, but will provide complementary, non-redundant capabilities that will be able to close significant readiness gaps in our nation's strategic ports. In addition to the four MSSTs mentioned above, the Coast Guard is planning to stand up MSSTs in other critical ports around the country. Additional NEPA analysis will be prepared for future ports as necessary.

The EAs will address the overall environmental impacts of establishing and operating each of the first four MSSTs including the implementation of minor shore side infrastructure support to accommodate MSST personnel and equipment and the operation of approximately 6 new Response Boats-Small (RB-S) in each of the above-mentioned ports. The urgency of the MSST national security mission has resulted in an implementation schedule that directs the Seattle, WA MSST to be operational by July 1, 2002; Chesapeake, VA MSST to be operational by August 1, 2002; Galveston, TX MSST to be operational by September 1, 2002; and San Pedro, CA to be operational by September 1, 2002. Public input is important in the preparation of these EAs. Your concerns and comments regarding the implementation of these MSSTs and their possible environmental impacts are important to the Coast Guard. You are invited to submit comments by May 31, 2002 using only one of the following means:

(1) By mail to: Headquarters, U.S. Coast Guard
Captain Wayne Buchanan
Chief, Office of Defense Operations (G-OPD)
Room 3121
2100 Second Street, SW
Washington, DC

(2) Or, by fax to LCDR Kirk Schilling at (202) 267-4278.
(3) Or by E-mail to KSchilling@comdt.uscg.mil.

In choosing among the above means for submitting your comments, please give due regard to the recent difficulties and delays associated with delivery of mail through the U.S. Postal Service to Federal facilities.

Written comments should include your name, address, and the specific port(s) to which the comment relates. The Coast Guard will consider all comments received by May 31, 2002 in the development and completion of each EA.

* An Affidavit of Publication verifies that the above Public Notice was posted in the Seattle Post-Intelligencer on May 16, 2002.

APPENDIX D

RESPONSES TO SCOPING COMMENTS

-----Original Message-----
From: Martin, Stephen G NWS [mailto:Stephen.G.Martin@NWS02.usace.army.mil]
Sent: Wednesday, May 22, 2002 1:17 PM
To: 'KSchilling@comdt.uscg.mil'
Cc: Ziminske, Mark T NWS; Martin, Stephen G NWS
Subject: MSST Implementation in Seattle - Request for Comments for the EA

Dear LCDR Schilling:

We are in receipt of Captain Buchanan's Dear Interested Party letter dated 13 May 2002 requesting agency comments on your planned implementation of a MSST implementation team in Seattle this year. We have coordinated with Mr. John Vogel of your Facilities, Design and Construction Center Pacific, regarding specific plans at the Seattle ISC. Because you plan no dredging or disposal of dredged material in waters of the U.S., and there are no plans for in-water construction for your response boats, there is no requirement for a Corps of Engineers Section 10/404 permit. We have no other authorities that would cause us to comment on the Seattle EA.

Thank you very much,

Mark Ziminske, Chief, Environmental Resources Section
Corps of Engineers, Seattle District (PM-PL-ER)
P.O. Box 3755
Seattle, Washington 98134-3755
Phone: 206-764-3620

June 4, 2002

Headquarters, U.S. Coast Guard
Captain Wayne Buchanan
Chief, Office of Defense Operations (G-OPD)
Room 3121
2100 Second Street, SW
Washington, DC 20593

SUBJ: Environmental Assessment for Establishment of Maritime Safety and Security Teams

Dear Captain Buchanan

The Port of Seattle strongly supports the establishment of Maritime Safety and Security Teams in Seattle, WA and at other vital maritime locations nationwide. The Coast Guard in the Puget Sound region does a very good job with the resources they have. However, U.S. Coast Guard Seattle is stretched very thin. They are responsible for protecting our domestic ports and the U.S. Maritime Transportation System from warfare and terrorist attacks in all of Puget Sound including ports and bases of military importance such as Seattle, Tacoma, Bremerton, and Everett. In addition to guarding military assets, the proposed teams are essential to help protect civilian communities along the waterfront, commercial shipping, and cruise vessels. Such acts could result in dire environmental consequences for the region. Spills, fires, and other marine accidents in Puget Sound also have a high potential to harm our valuable marine environment. The Coast Guard's marine safety and rescue programs are more important than ever and should not be compromised as their ability to guard against acts of war and terror is expanded. The additional 25' response boats and onshore infrastructure improvements will provide additional non-redundant readiness capabilities for Seattle and the region as a whole. Their proposed deployment as escorts for a variety of vessels and maintenance of specific security zones in our economically significant port will be a vital security tool. The potential environmental benefits of the proposed teams would far outweigh any potentially negative impacts of the proposal.

The notice for this proposal reached my office after the close of the comment period on May 31, 2002. However, I am submitting these comments anyway to assure that U.S. Coast Guard Headquarters is aware of the importance of the proposal to the security of the Puget Sound region. The Port of Seattle urges expeditious approval, funding, and implementation of this proposal to better protect critical domestic ports and the U.S. Maritime Transportation System from warfare and terrorist attacks in the Puget Sound region. The following statement in your notice is encouraging; "The urgency of the MSST security mission has resulted in an implementation schedule that directs the Seattle, WA MSST to be operational by July 1, 2002."

Please call me at 206-728-3117 if you need information or assistance from the Port of Seattle during the process.

Sincerely yours,

Jim Serrill
Jim Serrill
Seaport Security Director

MUCKLESHOOT INDIAN TRIBE
OFFICE OF THE TRIBAL ATTORNEY
39015 - 172ND Avenue S.E. • Auburn, Washington 98092-9763
Phone: (253) 939-3311 • FAX: (253) 931-8570

May 30, 2002

By Telefax

Captain Wayne Buchanan
Chief, Office of Defense Operations (G-OPD)
United States Coast Guard
2100 Second Street SW, Room 3121
Washington, DC 20593

Re: Environmental Assessment for Establishment of Seattle Marine Safety and Security Team

Dear Captain Buchanan:

The Muckleshoot Indian Tribe appreciates the opportunity to comment on the preparation of the above-referenced environmental assessment. As indicated in the enclosed letter of May 1, 2002, to the Commander Pacific Area, the Muckleshoot Indian Tribe holds treaty fishing rights under the Treaty of Point Elliot, 12 Stat. 927, and the Treaty of Medicine Creek, 10 Stat. 1132 which secure "the right of taking fish, at all usual and accustomed grounds and stations ... to said Indians...." The Tribe's adjudicated usual and accustomed grounds and stations include Elliot Bay and the Duwamish River, portions of which are shared with the Suquamish Tribe. The Tribe requests that the Coast Guard in its preparation of the proposed EA and implementation of security measures in the Seattle area engage in government to government consultations with the Muckleshoot Indian Tribe to ensure that the exercise of the Tribe's fishing rights is not disrupted. Please feel free to contact the undersigned should you have any questions.

Sincerely,

Richard Reich

Enc.

cc: Muckleshoot Fish Committee
Isabel Tinoco, Fisheries Department Director

Muckleshoot Indian Tribal Council

39015 172nd Avenue S.E. • Auburn, Washington 98092-9763
(253) 939-3311 • Fax (253) 931-6570

May 1, 2002

Commander
Coast Guard Pacific Area
Coast Guard Island, Building 50-6
Alameda, CA 94501-5100

Re: Muckleshoot Indian Tribe's Comments on Proposed Regulation Establishing a Protection Zone around U.S. Naval Vessels – Docket PAC AREA 02-001, 67 FR 12940 (March 20, 2002)

Dear Sir:

On March 20, 2002, the Coast Guard published a proposed regulation to permanently establish protection zones around U.S. naval vessels. It is apparent that in developing the proposed rule no consideration was given to the potential impact of the rule on the exercise of treaty Indian fishing rights in Puget Sound waters. *See*, 67 FR 12940, 12942 (March 20, 2002) ("This proposed rule does not have tribal implications . . . because it would not have a substantial direct effect on one or more Indian tribes . . . .") The Muckleshoot Indian Tribe submits the following comments to present concerns regarding the potential impact of the proposed rule on the exercise of its treaty fishing rights and to request that the final rule provide express guidance to local Coast Guard and Navy personnel on the necessity of accommodating the exercise of treaty Indian fishing rights in the waters of Puget Sound.

The Muckleshoot Indian Tribe is a federally recognized Indian tribe with a reservation located in southern King and northern Pierce County, Washington. In the mid-1850's the ancestors of the present day Muckleshoot people negotiated two treaties with the United States, the Treaty of Point Elliot, 12 Stat. 927, and the Treaty of Medicine Creek, 10 Stat. 1132. In those treaties the Muckleshoot people, together with other Western Washington Tribes, reserved the permanent right to take fish at usual and accustomed fishing places outside of their reservations. Article V of the Treaty of Point Elliot provides in pertinent part:

> The right of taking fish, at all usual and accustomed grounds and stations, is further secured to said Indians, in common with all citizens of the Territory . . . .

The Muckleshoot Tribe's treaty secured right to take fish at all usual and accustomed grounds and stations is a property right in the nature of an easement. *See, United States v. Winans*, 198 U.S. 371, 381-82 (1905). And, it is well established that tribal fishers may not be excluded from their fishing grounds absent clear and express Congressional authorization. *Washington v.*

Washington Passenger Fishing Vessel Association, 443 U.S. 658, 676 (1979); *United States v. Winans, supra; United States v. Oregon*, 718 F.2d 299, 304 (9th Cir 1983); *Northwest Seafarms, Inc. v. United States Army Corps of Engineers*, 931 F.Supp. 1515 (W.D.Wash 1996); *Muckleshoot Indian Tribe v. Hall*, 698 F.Supp. 1504 (W.D.Wash. 1988); *Confederated Tribes of the Umatilla Indian Reservation v. Alexander*, 440 F.Supp. 553 (D.Or. 1977).

The adjudicated usual and accustomed grounds and stations of the Muckleshoot Indian Tribe include Elliot Bay and the Duwamish River, portions of which are shared with the Suquamish Indian Tribe. As indicated in the accompanying description of the Muckleshoot Tribe's fishery, Muckleshoot tribal members actively fish in the area from Pier 91 to Duwamish Head just offshore of the Seattle waterfront and in the East and West waterways at the mouth of the Duwamish River in close proximity to anchorages used by the Navy during visits to the Seattle area each year in late July and early August for the annual Seafair Festival. Tribal fishers also make extensive use of the portion of Elliot Bay at the mouth of the Duwamish River and the East and West Waterways adjacent to Todd Shipyard, including the use of the Todd Shipyard docks to tie off set nets where they may come within one hundred yards of naval vessels that are moored or in drydock. The Tribe also conducts fishery enforcement patrols, engages in fishery and water quality research, and harvests shellfish in Elliot Bay – activities which may bring tribal members and vessels in proximity to naval vessels.

Implementation of the proposed regulation has the potential to result in exclusion of the Tribe from productive fishing sites and to lead to significant disruption of the Muckleshoot Tribe's fishery, unless appropriate accommodation is made for the exercise of treaty Indian fishing rights. Fortunately, the Tribe believes that the Coast Guard and Navy's security objectives and exercise of the Tribe's treaty fishing rights are not mutually exclusive objectives and that security can be maintained without the exclusion of tribal fishers from current fishing sites. To this end representatives of the Muckleshoot and Suquamish Tribes met with local Coast Guard, Navy, and Seattle Harbor Patrol representatives on April 25, 2002, to initiate discussion on measures to insure protection of naval assets without disruption of tribal fisheries. Measures identified for further discussion included improved communication and coordination, scheduling of port calls and routine non-emergency vessel movements to avoid fisheries, and placement of tribal liaison personnel on Coast Guard and Seattle Harbor Patrol vessels to assist in identification of tribal fishers during peak tribal fishing periods.

The Notice of Proposed Rulemaking acknowledges the need to balance security concerns with the burden on the public and provides accommodations for navigation within the protection zones and authorizes entry into the protection zone for navigational purposes. To insure that local Coast Guard and Navy personnel have the flexibility to accommodate the needs of tribal fishers, as they do other mariners, the Tribe believes that it is extremely important that the final regulation also provide direction to local Coast Guard and Navy personnel to implement measures that allow tribal members access to fishing sites. We therefore request that a new subsection (g) be added to the regulation that reads as follows:

(g) The Coast Guard, senior naval officer present in command, or the official patrol shall work with affected tribal governments to provide treaty Indian fishers access to usual and accustomed fishing sites within 100 yards of large U.S. naval vessels.

Please feel free to contact the undersigned should you have any questions.

Sincerely,

Stanley Moses

Stanley Moses, Vice Chairman
Muckleshoot Tribal Council

Attachments

cc: Lieutenant Paul Stocklin

MUCKLESHOOT INDIAN TRIBE ELLIOTT BAY/DUWAMISH/GREEN SALMON FISHERIES SCHEDULLE FOR 2002

FISHERY	DATES	LOCATION	EFFORT
Subsistence hook and line	All Year	Elliott Bay and Duwamish/Green River up to Highway 167	10 boats on any given day
Commercial Summer Steelhead	From June 1 to July 10 Seven days a week	Elliott Bay, Duwamish/Green River up to Highway 167	6 – 10; River Skiffs 1 – 5; Gillnetters
Chinook Test Fishery	July 17, 24, and 31 8:00 PM to 8:00 AM*	Elliott Bay	10; Gillnetters (5 fishing & 5 in place for backups)
Commercial Chinook	August 7 and 14 8:00 PM to 8:00 AM*	Elliott Bay and Duwamish/Green up to Highway 99	25; Gillnetters 40; River Skiffs
First Coho Test Fishery	September 12 6:00 PM to 8:00 AM*	Lower Duwamish up to 1st Av. S.	6; River Skiffs
Second Coho Test Fishery	September 19 6:00 PM to 8:00 AM*	Green River from 16th Av. S Bridge to Highway 99	3; River Skiffs
Coho Commercial	September 15 to November 8 6:00 PM Sunday to 12 noon Friday*	Elliott Bay and Duwamish up to Highway 99	25; Gillnetters 40; River Skiffs
Chum Commercial	November 10 to November 29 Sunday noon to Friday noon - up to 5 days per week*	Elliott Bay and Duwamish/Green up to Highway 99	25; Gillnetters 40: River Skiffs
Commercial Winter Steelhead	December 1 to December 20 Three days per week December 22 to February 15 Sunday noon to Friday noon - up to 5 days per week*	Elliott Bay and Duwamish/Green up to Highway 167	15; Gillnetters 25; River Skiffs

* Prior to any opening, fishers could be on the water reserving fishing sites well before the official start time.

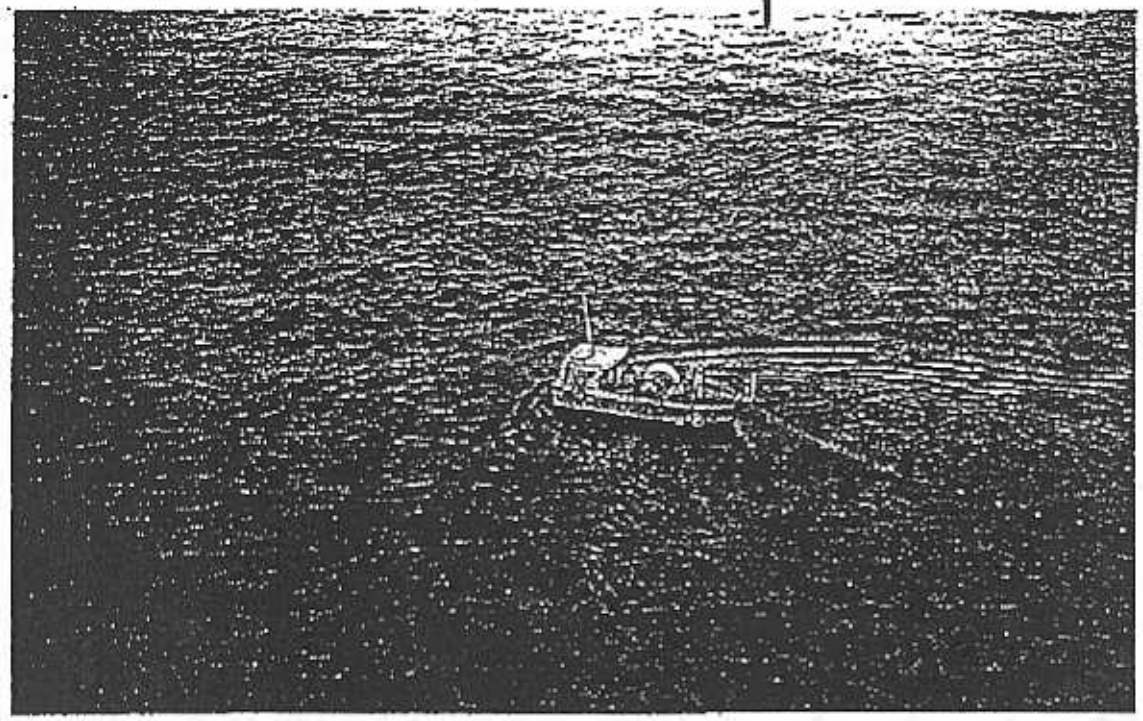
Note on Effort: Actual number of vessels may vary depending on salmon run-strength and other factors.

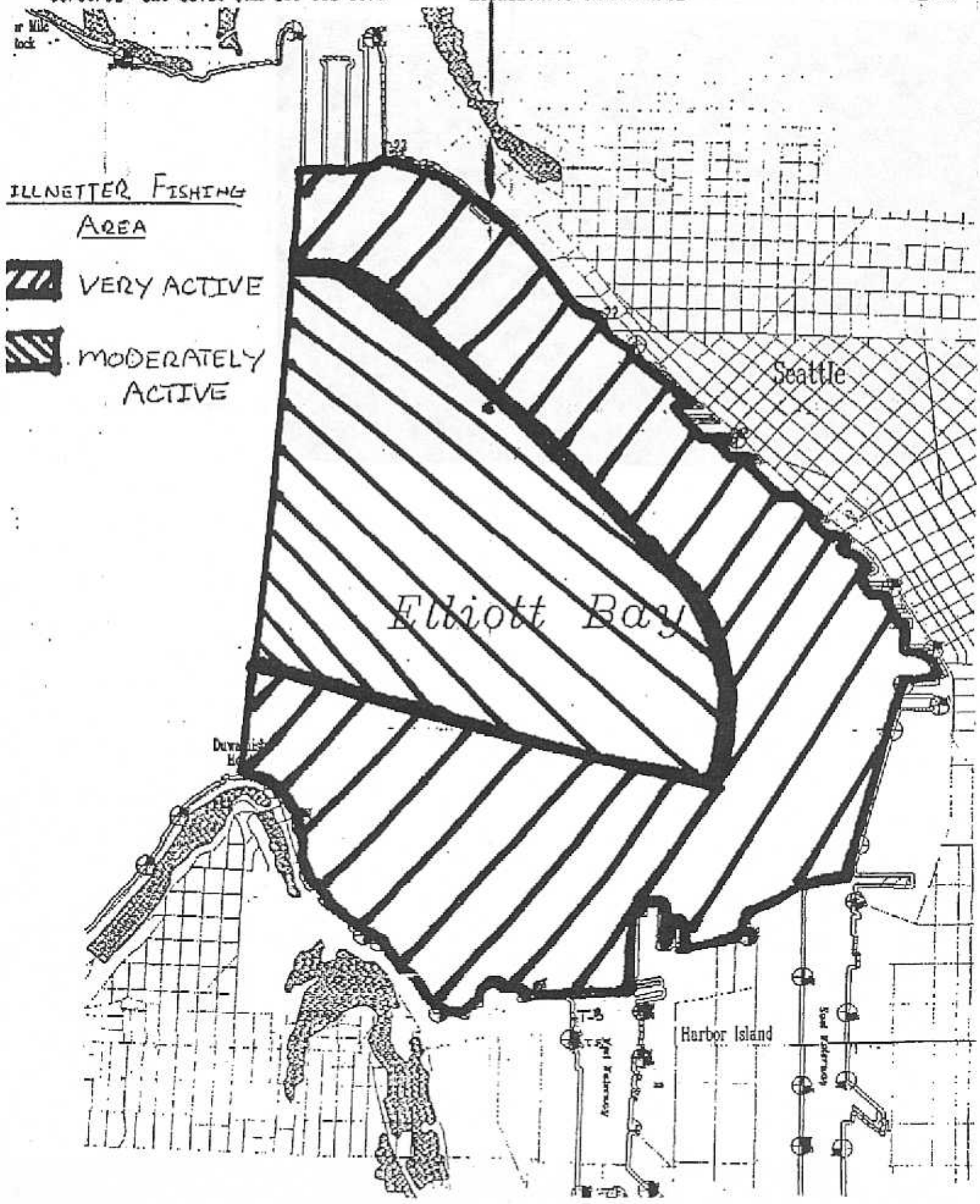
This is a description of the Gillnetter boat that is used for treaty fishing in Elliott Bay.

Gillnetter This type of boat is typically between 20 and 35 feet long with some type of cabin. The boat is commonly referred to as a bow picker or stern picker. It has a drum that is attached on inside at the front of the bow haul or at the back of the boat or stern. The drum is used to hold the gillnet mesh and is operated by a hydraulic system. The gillnetter boat can be used for salmon fishing or shell-fishing in Elliott Bay area.

A gillnetter when engaged in fishing typically will start by moving the boat in close to shore (within 50 feet). At this time the fisher will start laying out the net, which is done by backing the boat out away from shore. Once the fisher is done there will be twelve hundred feet of drift gillnet lay out. These boats are allowed to used 1 twelve hundred foot net. Once the net is deployed, *it is required that the fisher attends the net at all times.*

The two next pages show a picture of a gillnetter and a map of the where these boats fish in Elliott Bay. The area in Elliott Bay was broken down into two zones. First is the very active fishing zone (red) and second a moderately active fishing zone is marked out (blue).



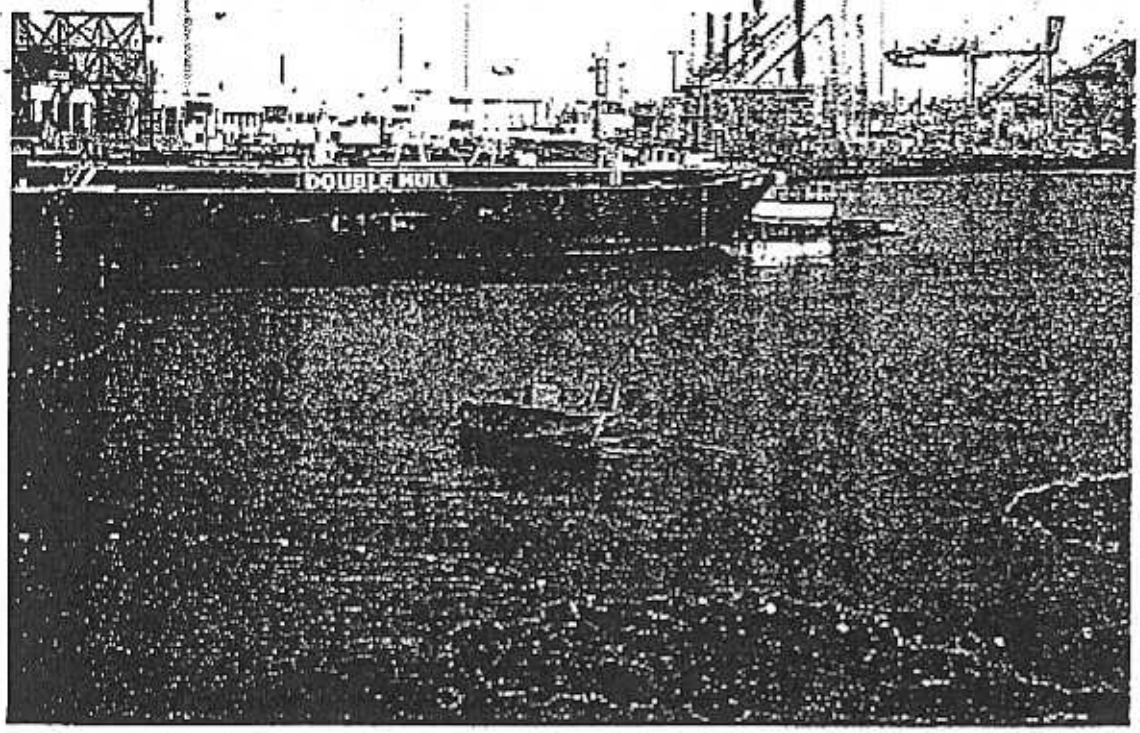

ILLNETTER FISHING AREA
VERY ACTIVE
MODERATELY ACTIVE
Seattle
Elliott Bay
Harbor Island

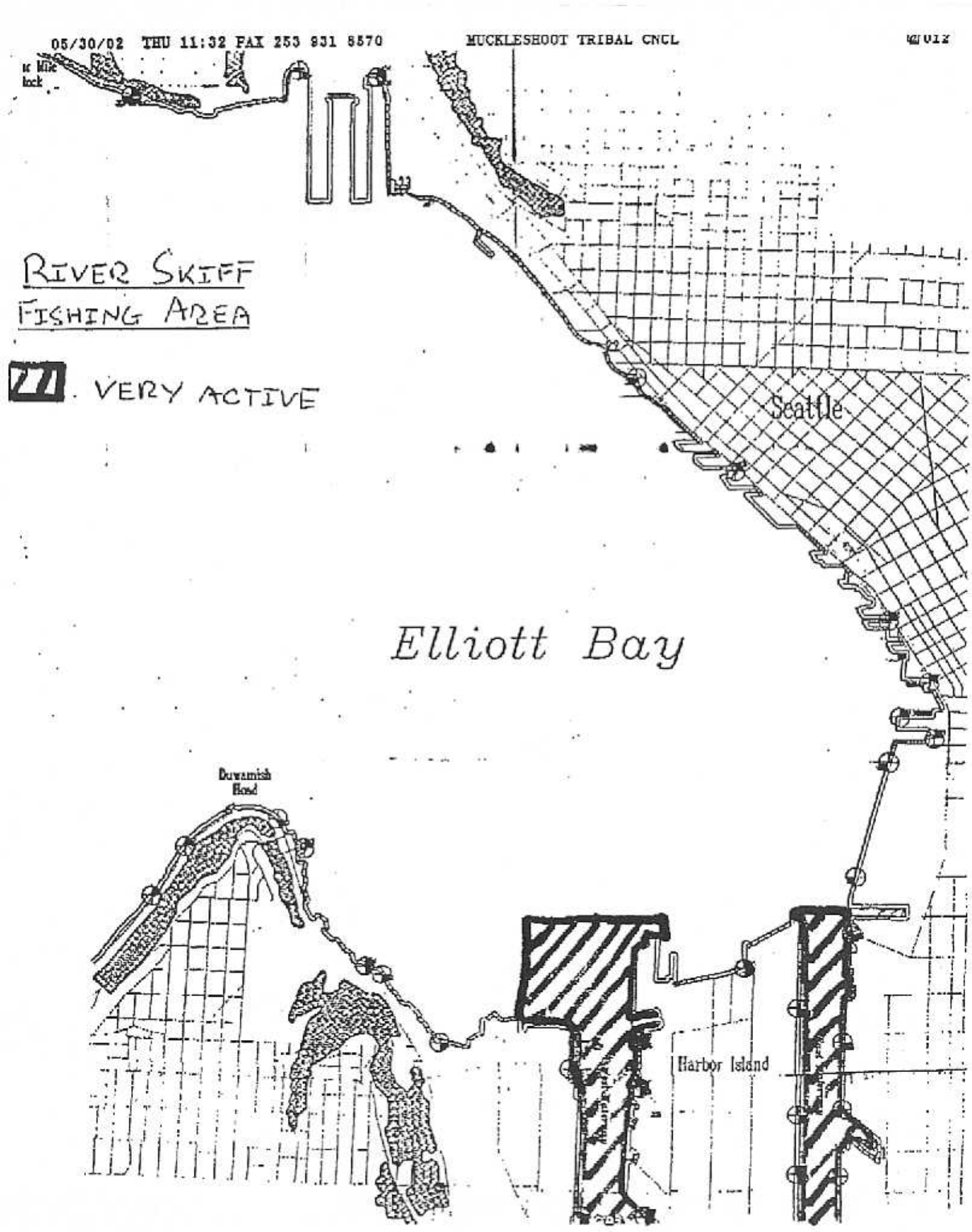
This is a description of the river skiff boat that is used for treaty fishing in the Duwmaish/Green River and Elliott Bay.

River Skiff This type of boat is typically between 14 and 22 feet long. It is usually a open haul boat with a center console where the fisher operates the boat. The set gillnets the fisher will use in fishing are just place in a pile in the front of boat. These nets are all set and pulled by hand. There is no hydraulics on this type of boat. This boat is used primarily for salmon fishing in the river but could also be used in the Elliott Bay area.

A river skiff when engaging in fishing will start by moving the boat right off the shoreline looking for a suitable attachment point to tie one end of the net off. Once the fisher has found such a point, this end of the net is then tied off to that point and the rest of the net is then laid out into the waterway. The end of the net that is in the waterway is then held down by an anchor. This type of set net can be laid many different ways in the water. The net could be laid parallel in tight to the shore, could be laid straight out or perpendicular from the shore or could be laid in a V -shape or L-shape set from the shoreline. This type of fishing requires all the fishers to have access to the shoreline. Each of these fisher's is allowed to fish up to 4 three hundred foot set nets. Once these nets are deployed, *it is not required for the fisher to stay with the net, but the fisher is required to check each net every so many hours.*

The next two pages show a picture of a river skiff and a small part of the river area where nets are deployed. One thing to note is that the river is commercially fished from the mouth at Elliott Bay all the way upriver into the city of Kent or lower Auburn region.


DOUBLE HULL


RIVER SKIFF
FISHING AREA
77. VERY ACTIVE
Seattle
Elliott Bay
Duwamish Head
Harbor Island

APPENDIX E

NOISE TERMINOLOGY AND ANALYSIS METHODOLOGY

APPENDIX E

This Appendix presents a detailed discussion of noise and its effects on people and the environment. An assessment of noise requires a general understanding of how sound is measured and how it affects people in the natural environment. The purpose of this appendix is to address public concerns regarding noise impacts.

Section E.1 is a general discussion on the properties of noise. Section E.2 summarizes the noise metrics discussed throughout this Environmental Assessment (EA). Section E.3 summarizes Land-Use Compatibility.

E.1 General

Noise, often defined as unwanted sound, is one of the most common environmental issues associated with aircraft operations. Of course, aircraft are not the only source of noise in an urban or suburban surrounding. Interstate and local roadway traffic, rail, industrial, and neighborhood sources also intrude on the everyday quality of life. Nevertheless, aircraft are readily identifiable to those affected by their noise, and typically are singled out for special attention and criticism. Consequently, aircraft noise problems often dominate analyses of environmental impacts.

Sound is a physical phenomenon, and consists of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. The interpretation of that sound as pleasant or unpleasant depends largely on the listener's current activity, past experience, and attitude toward the source of that sound. It is often true that one person's music is another person's noise.

The measurement and human perception of sound involves two basic physical characteristics, intensity and frequency. The intensity is a measure of the strength or amplitude of the sound vibrations and is expressed in terms of sound pressure. The higher the sound pressure, the more energy is carried by the sound and the perception of that sound is louder. The second important physical characteristic is sound frequency that is the number of times per second the air vibrates or oscillates. Low-frequency sounds are characterized as rumbles or roars, while sirens or screeches typify high-frequency sounds

The loudest sounds that can be detected comfortably by the human ear have intensities that are 1,000,000,000,000 times larger than those of sounds that can just be detected. Because of this vast range, any attempt to represent the intensity of sound using a linear scale becomes very unwieldy. As a result, a logarithmic unit known as the decibel (dB) is used to represent the intensity of a sound. Such a representation is called a sound level.

Because of the logarithmic nature of the decibel unit, sound levels cannot be added or subtracted directly and are somewhat cumbersome to handle mathematically. However, some simple rules of thumb are useful in dealing with sound levels. First, if a sound's intensity is doubled, the sound level increases by 3 dB, regardless of the initial sound level. For example:

60 dB + 60 dB = 63 dB, and

80 dB + 80 dB = 83 dB

The total sound level produced by two sounds of different levels is usually only slightly more than the higher of the two. For example:

60.0 dB + 70.0 dB = 70.4 dB

Because the addition of sound levels behaves differently than that of ordinary numbers, such addition is often referred to as "decibel addition" or "energy addition." The latter term arises from the fact that what we are really doing when we add decibel values is first converting each decibel value to its corresponding acoustic energy, then adding the energies using the normal rules of addition, and finally converting the total energy back to its decibel equivalent.

An important facet of decibel addition arises later when the concept of time-average sound levels is introduced to explain Day-Night Average Sound Level (DNL). Because of the logarithmic units, the louder levels that occur during the averaging period dominate the time-average sound level. As a simple example, consider a sound level which is 100 dB and lasts for 30 seconds, followed by a sound level of 50 dB which also lasts for 30 seconds. The time-average sound level over the total 60-second period is 97 dB, not 75 dB.

A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above about 120 dB begin to be felt inside the human ear as discomfort and eventually pain at still higher levels.

The minimum change in the time-average sound level of individual events that an average human ear can detect is about 3 dB. A change in sound level of about 10 dB is usually perceived by the average person as a doubling (or halving) of the sound's loudness, and this relation holds true for loud sounds and for quieter sounds.

Sound frequency is pitch measured in terms of hertz (Hz). The normal human ear can detect sounds that range in frequency from about 20 Hz to about 15,000 Hz. All sounds in this wide range of frequencies, however, are not heard equally well by the human ear, which is most sensitive to frequencies in the 1,000 to 4,000 Hz range. To account for the varied frequency sensitivity of people, we use the A-weighted scale that approximates the average, healthy human ear. The A-weighting de-emphasizes the low and high frequency portion of the noise signal and emphasizes the mid-frequency portion. Sound levels measured using A-weighting are most properly called A-weighted sound levels, while sound levels measured without any frequency weighting are most properly called sound levels. However, since most environmental impact analysis documents deal only with A-weighted sound levels, the adjective "A-weighted" is often omitted, and A-weighted sound levels are referred to simply as sound levels. In some instances, the author will indicate that the levels have been A-weighted by using the abbreviation dBA or dB(A), rather than the abbreviation dB, for decibel. As long as the use of A-weighting is understood to be used, there is no difference implied by the terms "sound level" and "A-weighted sound level" or by the units dB, dBA, and dB(A). The A-weighting function de-emphasizes higher and, especially, lower frequencies to which humans are less sensitive. Because the A-weighting is closely related to human hearing characteristics, it is appropriate to use A-weighted sound levels when assessing potential noise effects on humans and many terrestrial wildlife species. In this document, all sound levels are A-weighted and are reported in dB.

Sound levels do not represent instantaneous measurements but rather averages over short periods of time. Two-measurement time-periods are most common – 1 second and 1/8 of a second. A measured sound level averaged over 1 second is called a slow response sound level; one averaged over 1/8 of a second is called a fast response sound level. Most environmental noise studies use slow response measurements, and the adjective "slow response" is usually omitted. It is easy to understand why the proper descriptor "slow response A-weighted sound level" is usually shortened to "sound level" in environmental impact analysis documents.

E.2 Noise Metrics

A "metric" is defined as something "of, involving, or used in measurement." As used in environmental noise analyses, a metric refers to the unit or quantity that measures or represents the effect of noise on people. Noise measurements typically have involved a confusing proliferation of noise metrics as individual researchers have attempted to understand and represent the effects of noise. As a result, past literature describing environmental noise or environmental noise abatement has included many different metrics. Recently, however, various federal agencies involved in environmental noise mitigation have agreed on common metrics for environmental impact analyses documents, and both the Department of Defense (DoD) and the Federal Aviation Administration (FAA) have specified those which should be used for federal aviation noise assessments. These metrics are as follows.

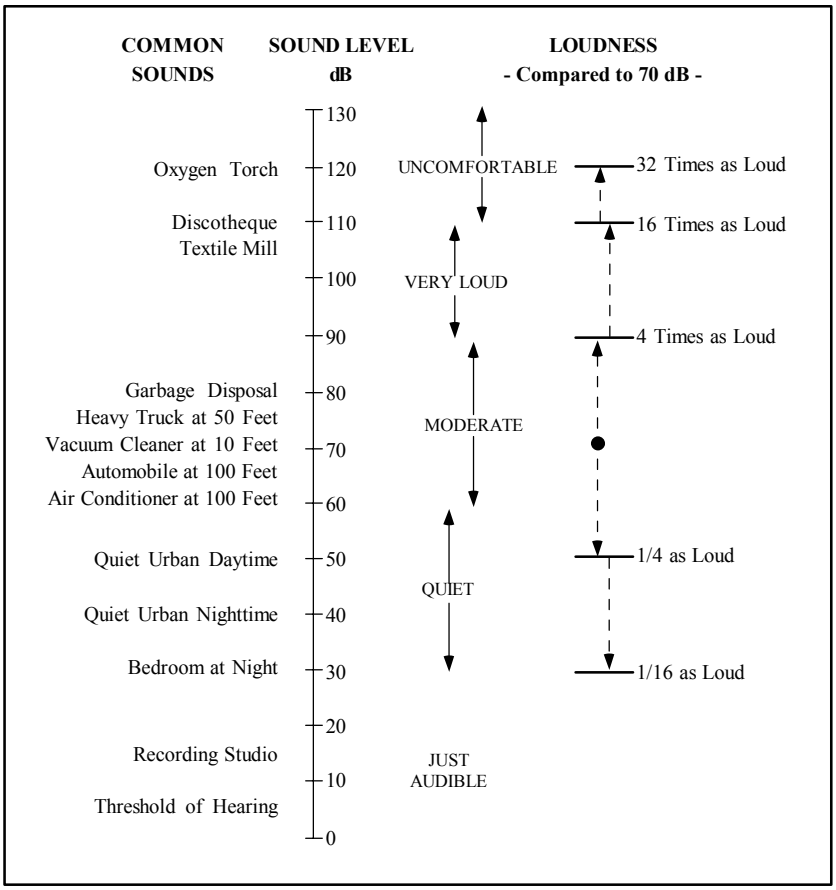
E.2.1 Maximum Sound Level

The highest A-weighted sound level measured during a single event in which the sound level changes value as time goes on (e.g., an aircraft overflight) is called the maximum A-weighted sound level or maximum sound level, for short. It is usually abbreviated by ALM, L_{max}, or LA_{max}. The typical A-weighted levels of common sounds are shown in Figure E-1. The maximum sound level is important in judging the interference caused by a noise event with conversation, TV or radio listening, sleep, or other common activities.

E.2.2 Sound Exposure Level

Individual time-varying noise events have two main characteristics: 1) a sound level which changes throughout the event, and 2) a period of time during which the event is heard. Although the maximum sound level, described above, provides some measure of the intrusiveness of the event, it alone does not completely describe the total event. The period of time during which the sound is heard is also significant. The sound exposure level (abbreviated SEL or LAE) combines both of these characteristics into a single metric.

Sound exposure level is a logarithmic measure of the total acoustic energy transmitted to the listener during the event. Mathematically, it represents the sound level of the constant sound that in one second would generate the same acoustic energy, as did the actual time-varying noise event. For example, since aircraft overflights usually last longer than one second, the SEL of an overflight is usually greater than the maximum sound level of the overflight.



Source: Harris 1979

Figure E-1. Typical A-Weighted Sound Levels of Common Sounds

Sound exposure level is a composite metric that represents both the intensity of a sound and its duration. It does not directly represent the sound level heard at any given time, but rather provides a measure of the net impact of the entire acoustic event. It has been well established in the scientific community that SEL measures this impact much more reliably than just the maximum sound level. Because the SEL and the maximum sound level are both A-weighted sound levels expressed in dBs, there is sometimes confusion between the two, so the specific metric used should be clearly stated.

E.2.3 Day-Night Average Sound Level

Time-average sound levels are the measurements of sound levels that are averaged over a specified length of time. These levels provide a measure of the average sound energy during the measurement period.

For the evaluation of community noise effects, and particularly aircraft noise effects, the day-night average sound level (abbreviated DNL or L_{dn}) is used. Day-night average sound level averages aircraft sound levels at a location over a complete 24-hour period, with a 10-dB adjustment added to those noise events that take place between 10:00 p.m. and 7:00 a.m. (local time) the following morning. This 10-dB

"penalty" represents the added intrusiveness of sounds that occur during normal sleeping hours, both because of the increased sensitivity to noise during those hours and because ambient sound levels during nighttime are typically about 10 dB lower than during daytime hours.

Ignoring the 10-dB nighttime adjustment for the moment, DNL may be thought of as the continuous A-weighted sound level that would be present if all of the variations in sound level that occur over a 24-hour period were smoothed out so as to contain the same total sound energy.

Day-night average sound level provides a single measure of overall noise impact, but does not provide specific information on the number of noise events or the individual sound levels that occur during the day. For example, a DNL of 65 dB could result from a very few noisy events, or a large number of quieter events.

As noted earlier for SEL, DNL does not represent the sound level heard at any particular time, but rather represents the total sound exposure. Scientific studies and social surveys that have been conducted to appraise community annoyance to all types of environmental noise have found the DNL to be the best measure of that annoyance. Its use is endorsed by the scientific community (American National Standards Institute [ANSI] 1980, 1988; U.S. Environmental Protection Agency [EPA] 1974; Federal Interagency Committee on Urban Noise [FICUN] 1980; Federal Interagency Committee on Noise [FICON] 1992).

The results of attitudinal surveys, conducted in different countries, show a remarkable consistency in the percentages of groups of people who express various degrees of annoyance when exposed to different levels of DNL. This is illustrated in Figure E-2, which summarizes the results of a large number of social surveys relating community responses to various types of noises, measured in DNL.

Figure E-2, taken from Schultz (1978), shows the original curve fit. A more recent study has reaffirmed this relationship (Fidell et al. 1991). Figure E-3 shows an updated form of the curve fit (Finegold et al. 1992) in comparison with the original. The updated fit, which does not differ substantially from the original, is the current preferred form. In general, correlation coefficients of 0.85 to 0.95 are found between the percentages of groups of people highly annoyed and the level of average noise exposure. The correlation coefficients for the annoyance of individuals are relatively low, however, on the order of 0.5 or less. This is not surprising, considering the varying personal factors that influence the manner in which individuals react to noise. Nevertheless, findings substantiate that community annoyance to aircraft noise is represented quite reliably using DNL.

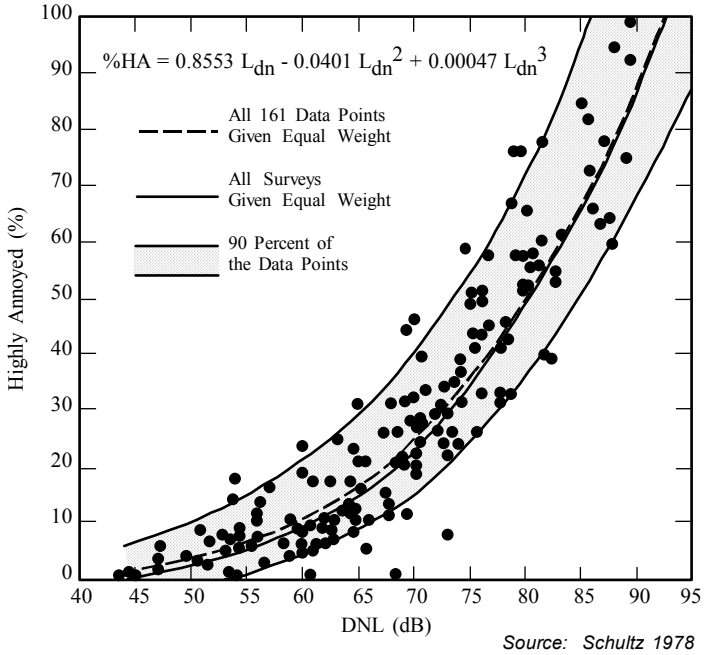


Figure E-2. Community Surveys of Noise Annoyance

E.3 Land-Use Compatibility

As noted above, the inherent variability between individuals makes it impossible to predict accurately how any individual will react to a given noise event. Nevertheless, when a community is considered as a whole, its overall reaction to noise can be represented with a high degree of confidence. As described above, the best noise exposure metric for this correlation is the DNL. In June 1980, an ad hoc Federal Interagency Committee on Urban Noise (FICUN) published guidelines for considering noise in land use planning (FICUN 1980). These guidelines related DNL to compatible land uses in urban areas. The committee was composed of representatives from the DoD, Department of Transportation, Department of Housing and Urban Development; the EPA; and the Veterans Administration. Since the issuance of these guidelines, federal agencies have generally adopted these guidelines to make recommendations to the local communities on land use compatibilities.

The FAA included the committee's guidelines in the Federal Aviation Regulations (Harris 1984). These guidelines are reprinted in Table E-1, along with the explanatory notes included in the regulation. Although these guidelines are not mandatory (see Notes in Table E-1), they provide the best means for evaluating noise impact in airport communities. In general, residential land uses normally are not compatible with outdoor DNL (Ldn values) above 65 dB. The extent of land areas and populations exposed to DNL of 65 dB and higher provides the best means for assessing the noise impacts of alternative aircraft actions.

Table E-1. Land Use Compatibility Guidelines with Yearly Day-Night Average Sound Level

LAND USE	YEARLY DAY-NIGHT AVERAGE SOUND LEVELS IN DECIBELS					
	BELOW 65	65-70	70-75	75-80	80-85	OVER 85
Residential						
Residential, other than mobile homes and transient lodgings	*Y*	*N(1)*	*N(1)*	*N*	*N*	*N*
Mobile home parks	*Y*	*N*	*N*	*N*	*N*	*N*
Transient lodgings	*Y*	*N(1)*	*N(1)*	*N(1)*	*N*	*N*
Public Use						
Schools	*Y*	*N(1)*	*N(1)*	*N*	*N*	*N*
Hospitals & nursing homes	*Y*	*25*	*30*	*N*	*N*	*N*
Churches, auditoria, & concert halls	*Y*	*25*	*30*	*N*	*N*	*N*
Government services	*Y*	*Y*	*25*	*30*	*N*	*N*
Transportation	*Y*	*Y*	*Y(2)*	*Y(3)*	*Y(4)*	*Y(4)*
Parking	*Y*	*Y*	*Y(2)*	*Y(3)*	*Y(4)*	*N*
Commercial Use						
Offices, business, & professional	*Y*	*Y*	*25*	*30*	*N*	*N*
Wholesale & retail-building materials, hardware, and farm equipment	*Y*	*Y*	*Y(2)*	*Y(3)*	*Y(4)*	*N*
Retail trade-general	*Y*	*Y*	*25*	*30*	*N*	*N*
Utilities	*Y*	*Y*	*Y(2)*	*Y(3)*	*Y(4)*	*N*
Communication	*Y*	*Y*	*25*	*30*	*N*	*N*
Manufacturing and Production						
Manufacturing, general	*Y*	*Y*	*Y(2)*	*Y(3)*	*Y(4)*	*N*
Photographic & optical	*Y*	*Y*	*25*	*30*	*N*	*N*
Agriculture (except livestock) & forestry	*Y*	*Y(6)*	*Y(7)*	*Y(8)*	*Y(8)*	*Y(8)*
Livestock farming & breeding	*Y*	*Y(6)*	*Y(7)*	*N*	*N*	*N*
Mining & fishing, resource production & extraction	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Recreational						
Outdoor sports arenas & spectator sports	*Y*	*Y(5)*	*Y(5)*	*N*	*N*	*N*
Outdoor music shells, amphitheaters	*Y*	*N*	*N*	*N*	*N*	*N*
Nature exhibits & zoos	*Y*	*Y*	*N*	*N*	*N*	*N*
Amusements, parks, resorts, & camps	*Y*	*Y*	*Y*	*N*	*N*	*N*
Golf courses, riding stables, & water recreation	*Y*	*Y*	*25*	*30*	*N*	*N*

Key:
Y (Yes) = Land use and related structures compatible without restrictions.
N (No) = Land use and related structures are not compatible and should be prohibited.
NLR = Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25 or 30 = Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structures.
Notes:
(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor-to-indoor NLR of at least 25 and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide an NLR of 20 dB; thus, the reduction requirements often are stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year-round. However, the use of NLR criteria will not eliminate outdoor noise problems.
(2) Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
(4) Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal level is low.
(5) Land-use compatible, provided special sound reinforcement systems are installed.
(6) Residential buildings require an NLR of 25 dB.
(7) Residential buildings require an NLR of 30 dB.
(8) Residential buildings not permitted.

Source: USDOT 1984 and FAA 1985

In 1990, the FICON was formed to review the manner in which aviation noise effects are assessed and presented. This group released its report in 1992 and reaffirmed the use of DNL as the best metric for this purpose (FICON 1992).

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APPENDIX F

OCEAN STEWARD

U.S. Department of Transportation
United States Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol G-OPL-4
Phone: (202) 267-2041
FAX: (202) 267-4082

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SEP 28 2000

LETTER OF PROMULGATION

From: Commandant
To: Distribution

1. Protecting our nation's natural resources is one of the Coast Guard's five strategic goals. Along with Maritime Safety, Maritime Security, Maritime Mobility, and National Defense, Protection of Natural Resources is one of the basic reasons the taxpayers fund the Coast Guard each year. Hence, it is one of the outcomes to which our entire organizational effort – programs, policies, and assets – should be dedicated. In our Strategic Plan 1999, I defined the Protection of Natural Resources Strategic Goals as "the elimination of environmental damage and natural resource degradation associated with all maritime activities." A vital aspect of achieving this goal is helping the nation recover and maintain healthy populations of marine protected species. OCEAN STEWARD is our strategic plan for making that happen.

2. OCEAN STEWARD provides the emphasis operational commanders, training commands, and administrative staffs need to prioritize and execute this increasingly important mission. The core idea behind OCEAN STEWARD is the premise that all of us, as members of the Coast Guard, have a responsibility to be good stewards of the ocean. If we adhere to this premise as individuals, then the Coast Guard, as an organization, will make great progress toward achieving OCEAN STEWARD's objectives.

3. As we enter the 21st century, our nation is becoming increasingly concerned about the ocean and the state of its living marine resources. Coast Guard leadership in protecting marine species, however, is nothing new; it dates back as far as the Fur Seal Act of 1897. The Coast Guard remains committed to continuing that tradition of leadership, and OCEAN STEWARD is your guide in this important endeavor.

JAMES M. LOY

Encl: (1) OCEAN STEWARD, Protected Living Marine Resources Strategic Plan

Dist: CG LANTAREA (A, Am, Ao), CG PACAREA (P, Pm, Po), CG DISTRICTS (d, m, o), CG ACADEMY, CG INSTITUTE, CG TRACEN Yorktown, CG TRACEN Cape May, CG TRACEN Petaluma, CG PACAREA TRATEAM, CG RFTC Cape Cod MA, CG RFTC Charleston SC, CG RFTC New Orleans LA, CG RFTC Kodiak AK, CG R&DC

COMMANDANT'S PREAMBLE

The Coast Guard's Strategic Plan 1999 states the nation's waterways and their ecosystems are vital to our economy and health. This is why we made the protection of natural resources, specifically the elimination of environmental damage and natural resource degradation associated with maritime activities, one of our five strategic goals, and made enforcing the federal regulations that result in all living marine resources achieving healthy, sustainable populations one of our performance goals. We already have formal plans in place to help us achieve some of these goals, particularly in the areas of pollution response and fisheries law enforcement. However, if we are to fully achieve our protection of natural resources strategic goal, we must become more involved in the efforts to recover and maintain our nation's marine protected species and the habitats on which they depend.

In recent years, there has been a dramatic increase in public and governmental concern about the state of our oceans and their living resources. Evidence of this includes:

- Increasing fishery management measures designed to reduce bycatch of non-targeted species, such as turtle excluder devices (TEDs), fixed-net pingers, and bycatch reduction devices (BRDs).
- Rising conflicts between advocates for species protection and resource users, such as those existing between Steller sea lion protection advocates and Bering Sea/Gulf of Alaska pollock fishers, and between northern right whale protection advocates and New England fixed gear fishers.
- The recent formation of federal and state government task forces to protect coral reefs, northern right whales, Pacific salmon, and other endangered species.
- National Marine Fisheries Service Report to Congress (1999) concluding, of the 230 stocks for which the status can be determined, 98 are overfished and five are approaching overfished - an increase from 86 overfished stocks in 1997 and 90 in 1998.
- Fisheries closures and restrictions in the Gulf of Maine and the West Coast that have had a devastating economic impact on groundfish fleets.
- Increasing litigation against government agencies (including the Coast Guard) by organizations trying to influence marine resource management policy.
- Funding for the Lands Legacy Initiative, which included $27 million to protect ocean and coastal resources in FY 2000 and a request for $266 million for FY 2001.
- The recent signing, by President Clinton, of Executive Order 13158, strengthening and expanding the nation's system of marine protected areas (MPAs).

The Coast Guard already has effective, coordinated strategies for enforcing our nation's fisheries management regulations, protecting the marine environment from oil pollution, and responding to maritime disasters. However, our approach to marine protected species (MPS), specifically those species and geographic areas that are protected under the Endangered Species Act, the Marine Mammal Protection Act, the National Marine Sanctuaries Act, or similar regulations or executive orders, is less clearly defined. Problems resulting from this include:

- Initial delay in establishing a coordinated plan for accomplishing assigned Atlantic Protected Living Marine Resources Initiative (APLMRI) tasks.

- Difficulty in addressing potential conflicts between high-speed craft and marine protected species in New England.
- Low funding priority for funding assessments to address the impact Coast Guard operations have on marine protected species throughout the Pacific Area.
- Inconsistency in handling cross-directorate MPS issues such as working with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) on marine mammal protection initiatives and responding to the Coral Reef Initiative (Executive Order 13089).
- Working level frustration with lack of guidance for dealing with endangered species lawsuits, creation of Memorandums of Understanding (MOU) with NMFS, potential regulation of high-speed craft and whale watch industry vessels, and other MPS issues.

A robust ocean environment is essential to our nation's prosperity, and healthy populations of marine protected species are essential to maintaining a robust ocean environment. Just as protecting our water and air became top national priorities during the last decades of the 20th century, protecting our oceans is becoming a top priority of the 21st century. In the coming years, the nation will look for leaders to exercise responsible stewardship of our ocean resources. The Coast Guard is stepping forward and embracing this role, it is one of the most important roles we will ever undertake.

Ocean Steward Purpose

The purpose of Ocean Steward is to help the Coast Guard achieve its strategic goal Protection of Natural Resources and its performance goal of enforcing federal regulations that result in all living marine resources achieving healthy, sustainable populations. Ocean Steward provides a clearly defined strategy for our role in helping the nation recover and maintain healthy populations of marine protected species; it captures the things we are already doing and provides a comprehensive list of objectives we can achieve if we are provided the necessary resources. Ocean Steward complements our fisheries enforcement strategic plan, Ocean Guardian. Together, Ocean Steward and Ocean Guardian provide a roadmap for the Coast Guard's efforts in ensuring our nation's waterways and their ecosystems remain productive by protecting all our nation's living marine resources from degradation.

Coast Guard Strategic Goal: Protection of Natural Resources

Eliminate environmental damage and natural resource degradation associated with all maritime activities

The nation's waterways and their ecosystems are vital to our economy and health. If the United States is to enjoy a rich, diverse and sustainable ocean environment, then we must halt the degradation of our ocean's natural resources associated with maritime activities. This includes ensuring our country's marine protected species are provided the protection necessary to help their populations recover to healthy, sustainable levels. Providing adequate protection will require the United States to enact and enforce a wide range of regulations to govern marine resource management and use. Ocean Steward will enable the Coast Guard, as the nation's primary at sea law enforcement agency, to develop and enforce those regulations necessary to help recover and maintain our country's marine protected species. Moreover, Ocean Steward will ensure the Coast Guard is viewed as a leader in regional, national and international efforts to protect the nation's marine ecosystems.

Ocean Steward Vision Statement

The Coast Guard will be a leader in the effort to recover and maintain our nation's marine protected species

OCEAN STEWARD MISSION STATEMENT

We will enforce and comply with marine protected species regulations, work with other agencies and organizations to develop appropriate regulations for marine protected species recovery, and publicize our efforts to gain the support and resources necessary to fully implement Ocean Steward

The Coast Guard will implement a formal MPS strategy, Ocean Steward, with a clear, focused vision. We will educate and train our members to make certain every individual understands that stewardship of the ocean environment is a fundamental part of their duty. We will use existing enforcement authorities, and seek new authorities as necessary, to help reduce the risks of extinction and recover marine protected species populations. We will conduct our own operations so as to minimize our impact on marine protected species. We will assess the impact on marine protected species when developing both internal and external regulations and policies. We will work closely with other federal, state and local governments, as well as environmental and research organizations, to carry out the nation's MPS policies. We will inform the public of both the importance of the mission and the ways in which they can help lessen the impact of human activities on marine protected species. We will widely publicize our strategy and results to inform policymakers and the public of the value of our MPS efforts.

GUIDING PRINCIPLE

We are Stewards of the Ocean

The guiding principle behind Ocean Steward is instilling in every member of the Coast Guard the belief that each individual is a steward of the ocean. This concept must be promoted throughout the entire organization. Our training commands – Training Center Cape May, the Coast Guard Academy, Training Center Yorktown, Training Center Petaluma, and the Regional Fisheries Training Centers – should produce graduates who understand and believe preservation of marine protected species is a fundamental Coast Guard responsibility. Our boarding officers and marine inspectors should know, and want to know, what marine protected species exist in their AORs, the regulations that exist to protect them, and how his or her actions can promote species recovery. Our operations and marine safety units should know, and want to know, the concerns of federal, state and local officials, and should work cooperatively with them. Our stations, cutters and marine safety offices should distribute appropriate educational literature. At every opportunity Coast Guard personnel should let the public know we are on watch protecting their oceans and waterways, and inform them of what they can do to help eliminate the degradation of natural resources associated with maritime activities. Our deck watch officers, aircrews and coxswains should be able to recognize the marine protected species they are likely to

encounter and report sightings to interested organizations. Our staff officers and port operations personnel should ensure, and want to ensure, recovery of marine protected species is taken into account when making policy decisions, and they should prioritize the workloads of their personnel to reflect this emphasis. In short, every member of the Coast Guard must think of himself or herself as a steward of the ocean. Committing to that, both organizationally and individually, we will enable us to reach our overarching Protection of Natural Resources strategic goal.

OCEAN STEWARD STRATEGIES

Raise the Profile of the MPS Mission: We will raise the profile of the MPS mission to the status of missions such as maritime drug interdiction, marine pollution prevention and fisheries enforcement.

Obtain Necessary Resources and Authorities: We will prioritize existing resources, use existing authorities, and seek additional resources and authorities as necessary to implement Ocean Steward.

Partner with Other Agencies: We will work closely with other agencies and organizations involved in the preservation and recovery of marine protected species to eliminate redundancy, and provide a clear link between enforcement and management.

Publicize Our Efforts: We will stress the importance of the Coast Guard's role as part of a comprehensive management scheme and highlight our successful efforts to the public.

Each of these strategies contains sets of near, mid, and long-term objectives. Near-term objectives are those that can be achieved without a major reallocation of resources. Mid-term objectives require addition resources or a significant reallocation of resources. Long-term objectives are those objectives that will require institutional changes such as seeking additional authorities or creation of program offices.

STRATEGY: RAISE THE PROFILE OF THE MPS MISSION

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1. DISCUSSION

If the Coast Guard is to be truly committed to protecting the ocean and its resources, then, in the eyes of our own people, recovery of marine protected species must be just as important as traditional missions such as maritime drug interdiction, marine pollution prevention, and fisheries enforcement. We must go beyond development of single initiatives in response to pressure or crisis. We should approach MPS issues with the same proactive, integrated, long-term strategy we use for addressing counterdrug operations, fisheries law enforcement, and commercial vessel safety. Every member of the Coast Guard must know it is part of our job to help recover and maintain our marine

protected species, just as they know it is our job to rescue those in distress. If we understand this concept individually, we will certainly convey that image organizationally.

2. Key Objectives

a. Near Term

1) Incorporate MPS issues into CG performance planning.	G-CCS
2) Develop Area and District MPS operating and enforcement guidance.	G-O/Areas/ Districts
3) Emphasize area specific MPS issues in the curriculum of all 5 Regional Fisheries Training Centers (RFTC).	G-O/G-W/ Areas/RFTCs
4) Identify ways to increase CG Auxiliary participation in MPS mission.	G-O
5) Identify ways to increase focus on MPS issues in Sea Partners program.	G-M
6) Measure the effectiveness of current MPS initiatives such as compliance with the Mandatory Ship Reporting System (MSR) and manatee speed zone regulations.	G-O
7) Designate MPS points of contact (POC) at HQ/Areas/Districts, and create a CG network for information flow on MPS issues.	G-O/Areas/ Districts

b. Mid Term

1) Increase Endangered Species Act/Marine Mammal Protection Act enforcement pulse ops during critical seasons.	G-O/Areas/ Districts
2) Ensure current and potential MPS missions (patrol of remote coral reefs, removal of derelict fishing gear, assisting in disentanglement of whales, etc.) are included in Deepwater decision making process.	G-O
3) Increase CG participation in environmental cleanup events such as the Center for Marine Conservation's annual International Coastal Clean Up.	G-M/G-O
4) Incorporate MPS mission into curriculum of all entry-level and accession training programs (e.g., Officer Candidate School, the Academy, Cape May, and Civilian Indoctrination).	G-W
5) Incorporate MPS issues into International Maritime Officers Course and Mobile Training Teams.	G-CI
6) Designate MPS POC at appropriate CG units.	Districts
7) Include MPS guidance in Maritime Law Enforcement Manual updates.	G-O
8) Include MPS guidance in Marine Safety Manual updates.	G-M

c. Long Term

1) Create HQ cross-directorate MPS office.	G-M/G-O
2) Incorporate MPS questions into Servicewide Examinations.	G-W
3) Add MPS material to appropriate A School curricula (e.g., BM, QM, and MST).	G-W
4) Add MPS material to appropriate C School curricula (e.g., Boarding Officer Course, Boarding Team Member Course, and Marine Safety Petty Officer Course).	G-W

STRATEGY: OBTAIN NECESSARY RESOURCES AND AUTHORITIES

1. DISCUSSION

As national sentiment builds for increasing the protection of our oceans, the Coast Guard should be at the top of the list of agencies that the public demands to be adequately funded. We should reinforce this by documenting our need for, and requesting, the additional resources required to meet the increasing enforcement and regulatory demands in the oceans environment. The public must view the Coast Guard as a leader in preserving our oceans and their protected species. When it is the right thing to do, we should seek to expand our enforcement and regulatory roles, and not shy away for fear of acquiring additional mandates or becoming the target of legal action. If we can be leaders in maritime search and rescue, drug interdiction and pollution prevention, then we can also become leaders in the recovery of marine protected species.

2. KEY OBJECTIVES

a. Near Term

1) Request funding for implementation of Ocean Steward through annual budgeting and resource allocation processes.	G-I/G-M/ G-O/G-
2) Include resource hour requests for implementation of Ocean Steward in input to the annual Operational Guidance letter.	G-O/Areas
3) Assess the need for more enforcement authority to protect resources of various marine protected areas and sanctuaries.	G-I /G-M/ G-O
4) Monitor and evaluate effectiveness of the Mandatory Ship Reporting System (MSR).	G-M/G-O
5) Monitor R&D efforts to develop new technologies for marine mammal detection and avoidance in order to plan for possible acquisition of feasible technologies.	G-O/G-S

b. Mid Term

1) Develop better measures of effectiveness for MPS enforcement efforts.	G-O
2) Support Resource Proposals that address requirements for MPS activities.	G-CCS
3) Allocate resources required to implement Ocean Steward in the annual Operational Guidance letter.	G-O
4) Propose statutory changes and new regulations to improve CG ability to support the nation's MPS objectives.	G-L/G-M/ G-O

c. Long term

1) Consider seeking expanded authority for regulation of vessels in order to protect marine protected species.	G-L/G-M/ G-O

STRATEGY: PARTNER WITH OTHER AGENCIES AND ORGANIZATIONS

1. DISCUSSION

Our leadership should seek opportunities to help recover and maintain the nation's marine protected species (MPS) by working more closely with the National Oceanic and Atmospheric Administration (NOAA), the National Marine Fisheries Service, the National Marine Sanctuaries (NMS), the U.S. Fish and Wildlife Service, the Department of State, the Department of Defense, state and local governments, non-governmental organizations, industry, research institutions, and international organizations. We should partner with concerned agencies and organizations to ensure MPS issues are considered whenever agencies propose new regulations. We should work closely with NOAA, NMFS, the NMS, state and local governments, and international organizations to ensure we are doing all we can to provide enforcement for various marine protected areas, and to assist them with their education and outreach initiatives. We should reach out to other management agencies and research institutions to assist in providing the data needed to answer important questions about marine protected species.

2. KEY OBJECTIVES

a. Near Term

1) Maximize assistance to NMFS in investigation and prosecution of protected MPS incidents.	G-O
2) Work closely with NMFS on MPS issues such as fishing gear conflicts, vessel traffic management, and bycatch reduction.	G-M/G-O
3) Work closely with the Navy to monitor research and development efforts to use acoustics for tracking and avoiding endangered whales.	G-O/G-C
4) Use MOUs, as appropriate, to define relations with the National Marine Sanctuaries and other marine protected areas.	G-L/G-M/ G-O
5) Engage other agencies in a discussion of remote marine protected areas.	G-M/G-O
6) Increase our role in federal and international recovery teams and task forces (e.g., the Coral Reef Task Force, the Manatee Recovery Team, and Right Whale Recovery Plan Implementation Teams).	G-M/G-O
7) Emphasize ship-riding opportunities for NMFS and NMS personnel on CG fisheries/MPS patrols.	G-O

b. Mid Term

1) Establish a senior officer liaison billet to NOAA to increase CG input and interaction in developing MPS issues and regulations.	G-M/G-O
2) Establish a senior officer liaison billet to Council on Environmental Quality (CEQ).	G-M/G-O
3) Create opportunities for undergraduate/graduate level marine affairs students to experience CG fisheries and MPS operations.	G-O

c. Long term

1) Consider engaging other agencies in joint rulemaking for MPS regulations.	G-L/G-M

STRATEGY: PUBLICIZE OUR EFFORTS

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1. DISCUSSION

The Coast Guard already has many marine protected species success stories to tell. We are partnering with the USFWS to educate the boating public and reduce manatee deaths by enforcing speed zone regulations in Florida. We are working closely with NMFS and environmental agencies to help protect the highly endangered northern right whale. In Hawaii, we remove tons of derelict fishing nets from coral reefs that are critical habitat of the endangered Hawaiian monk seal. Conducting this work, however, is only half of the job.

If the public is to perceive us as stewards of the ocean, then we must highlight our efforts and successes to the press and the public at every opportunity. Local units need to let communities know what we are doing to protect their waters. Districts should emphasize the importance of our MPS mission in maintaining healthy, sustainable ecosystems. Area and Headquarters staffs must cultivate relationships with the press, civic leaders, stakeholders and legislators to ensure they are aware of the valuable work the Coast Guard is doing. The public must recognize we are the nation's most valuable maritime asset in the effort to protect and sustain our oceans and their resources. The more we are seen taking positive, decisive action and producing good results, the more the public will demand we be properly resourced to perform this vital mission.

2. KEY OBJECTIVES

a. Near Term

1) Maximize publicity of cooperative MPS efforts with federal and state agencies and non-governmental organizations.	G-I/G-L/ G-M/G-O
2) Maximize publicity of Sea Partners MPS initiatives.	G-I/G-M
3) Use inspections and examinations as opportunities to provide MPS information packages to vessels.	G-M/G-O

b. Mid Term

1) Use publicity to generate interest in, and develop ideas for, future marine environment cleanups and other initiatives.	G-I
2) Optimize publicity of CG role in MPS task forces.	G-I
3) Maximize publicity of CG Auxiliary public education efforts in MPS identification, sensitivity, and avoidance measures.	G-I/G-O

c. Long term

1) Develop an interactive forum for public comment and ideas regarding MPS protection.	G-I
2) Raise the profile of the MPS mission to attract recruits with interest in environmental issues.	G-W